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**UTILITY
PATENT APPLICATION
TRANSMITTAL**

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. 32161 Total Pages 381

First Named Inventor or Application Identifier

Toshihiko Munetsugu

Express Mail Label No. EL384023390US

PTO
12/20/99

APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

1. Fee Transmittal Form
(Submit an original, and a duplicate for fee processing)

2. Specification [Total Pages 135]
(preferred arrangement set forth below)

- Descriptive Title of the Invention
- Cross References to Related Applications
- Statement Regarding Fed sponsored R & D
- Reference to Microfiche Appendix
- Background of the Invention
- Brief Summary of the Invention
- Brief Description of the Drawings (if filed)
- Detailed Description
- Claim(s)
- Abstract of the Disclosure

3. Drawing(s) (35 USC 113) [Total Sheets 243]

4. Oath or Declaration [Total Pages 0]

a. Newly executed (original or copy)

b. Copy from a prior application (37 CFR 1.63(d))
(for continuation/divisional with Box 17 completed)
(Note Box 5 below)

- i. DELETION OF INVENTOR(S)
Signed statement attached deleting
Inventor(s) named in the prior application,
see 37 CFR 1.63(d)(2) and 1.33(b).

5. Incorporation By Reference (useable if Box 4b is checked)
The entire disclosure of the prior application, from which a
copy of the oath or declaration is supplied under Box 4b,
is considered as being part of the disclosure of the
accompanying application and is hereby incorporated by
reference therein.

6. Microfiche Computer Program (Appendix)

7. Nucleotide and/or Amino Acid Sequence Submission
(if applicable, all necessary)

- a. Computer Readable Copy
- b. Paper Copy (Identical to computer copy)
- c. Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

8. Assignment Papers (cover sheet & document(s))

9. 37 CFR 3.73(b) Statement Power of Attorney
(when there is an assignee)

10. English Translation Document (if applicable)

11. Information Disclosure Statement (IDS)/PTO-1449 Copies of IDS Citations

12. Preliminary Amendment

13. Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)

14. Small Entity Statement filed in prior application,
Statement(s) Status still proper and desired

15. Certified Copy of Priority Document(s)
(if foreign priority is claimed)

16. Other: Check for \$1,372.00
.....
.....

17. If a CONTINUING APPLICATION, check appropriate box and supply the requisite information:

Continuation Divisional Continuation-in-part (CIP) of prior application No. /

18. CORRESPONDENCE ADDRESS

Customer Number or Bar Code Label (100-1110) or Correspondence address below
(Insert Customer No. or Attach barcode label here)

NAME	Jeffrey J. Sopko		
	Pearne, Gordon, McCoy & Granger		
ADDRESS	1200, Leader Building		
CITY	Cleveland	STATE	Ohio
COUNTRY	US	TELEPHONE	(216) 579-1700
		ZIP CODE	44114
		FAX	(216) 579-6073

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PATENT

PEARNE, GORDON, McCOY & GRANGER
526 Superior Avenue, East
Suite 1200
Cleveland Ohio 44114-1484
(216) 579-1700

Attorney Docket No. 32161

Assistant Commissioner for Patents
Box PATENT APPLICATION
Washington, D.C. 20231

Sir:

Transmitted herewith for filing by other than a small entity is the patent application of:

Inventor: Toshihiko Munetsugu, Minoru Etoh, Shouichi Araki,
and Koichi Emura

For: DATA PROCESSING DEVICE, DATA PROCESSING
METHOD AND STORAGE MEDIUM, AND PROGRAM
FOR CAUSING COMPUTER TO EXECUTE THE DATA
PROCESSING METHOD

243 sheets of informal drawings are included.

An assignment of the invention to Matsushita Electric Industrial Co., Ltd. will be forwarded.

Priority is claimed under 35 U.S.C. §119 on the basis of the following foreign applications:

Japanese Patent Application No. Hei. 10-371483 Filed December 25, 1998
Japanese Patent Application No. Hei. 11-271404 Filed September 24, 1999
Japanese Patent Application No. Hei. 11-350479 Filed December 9, 1999

Certified copies of these applications will be forwarded.

"Express Mail" mailing label number EL384023390US

Date of Deposit 12/20/99

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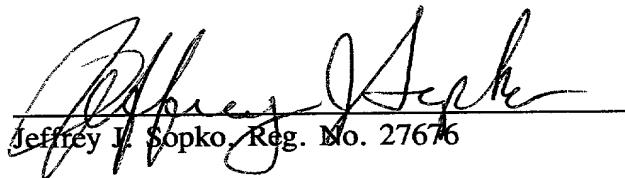
<u>For</u>	<u>Number</u>	<u>Rate</u>	<u>Fees</u>
Total claims in excess of 20:	34	× \$18.00	\$612.00
Independent claims in excess of 3:	0	× \$78.00	\$0.00
Multiple dependent claims, if any, add surcharge of \$260.00:			\$0.00
Non English Specification, add surcharge of \$130.00:			\$0.00
		Basic Fee	\$760.00
		TOTAL FILING FEE	<u>\$1,372.00</u>
Assignment Recordal Fee of \$40.00			\$0.00
		<u>TOTAL FEE</u>	<u>\$1,372.00</u>

A check in the amount of the Total Fee calculated above is enclosed.

The Commissioner is hereby authorized to charge any fees under 37 C.F.R. §§1.16 and 1.17 which may be required during the entire pendency of this application, or to credit any overpayment, to Deposit Account No. 16-0820, Order No. 32161.

Respectfully,

PEARNE, GORDON, McCOY & GRANGER



Jeffrey J. Sopko Reg. No. 27676

Date: 12/20/99

**DATA PROCESSING DEVICE, DATA PROCESSING METHOD AND
STORAGE MEDIUM, AND PROGRAM FOR CAUSING
COMPUTER TO EXECUTE THE DATA PROCESSING METHOD**

5

BACKGROUND OF THE INVENTION

The present invention relates to a media content data processing device, a data processing method, a storage medium, and a program, all being related to viewing, playback, and delivery of continuous audio-visual data (media content), such as a motion 10 picture, a video program, or an audio program, wherein the synopsis or a highlight scene of media content or only a scene of media content desired by the audience is played back and delivered.

Conventional media content has conventionally been played back, delivered, or stored on the basis of individual files 15 storing media content.

As described in Japanese Patent Laid-Open No. Hei-10-111872, according to a method of retrieving a specific scene of a motion picture, a change between scenes of the motion picture (hereinafter referred to as a "scene cut") is detected. To each 20 scene cut are added additional data, such as a time code of the start frame, a time code of the end frame, and a keyword of the scene.

As an alternative method, Carnegie Mellon University (CMU) has attempted to summarize a motion picture by detecting 25 scene cuts of a motion picture, detecting a human face or a caption,

and detecting a key phrase through speech recognition [Michael A. Smith and Takeo KANADE "Video Skimming and Characterization through Combination of Image and Language Comprehension Techniques" CMU-CS-97-111, February 3, 1997].

5 When the motion picture is played back on a per-file basis, reviewing the synopsis of the motion picture has been impossible. Further, even when a highlight scene or scenes desired by the user are retrieved, the scene or scenes must be searched from the head of media content. Further, in the case of delivery of a
10 motion picture, all the data sets of a file are transmitted, thus requiring a very long transmission time.

According to the method described in Japanese Patent Application Laid-Open No. Hei-10-111872, scenes can be retrieved through use of a keyword, thus facilitating retrieval of scenes
15 desired by the user. The additional data do not include a relationship or connection between the scenes. For this reason, the method encounters difficulty in retrieving, e.g., one subplot of a story. Further, when retrieving scenes based on only a keyword, the user encounters difficulty in gaining awareness of
20 which scenes are contextually important. Therefore, preparation of a synopsis or highlight scenes becomes difficult.

The method developed by CMU enables summarization of a motion picture. However, summarization results in a digest of a single, fixed pattern. For this reason, summarization of a
25 motion picture into a digest which requires a different playback

time; for example, a digest whose playback time assumes a length of three or five minutes, is difficult. Further, summarization of a motion picture desired by the user; such as selection of scenes including a specific character, is also difficult.

5

SUMMARY OF THE INVENTION

The object of the present invention is to provide means for selecting, playing back, and delivering only a synopsis, a highlight scene, or a scene desired by the audience, at the time of playback of media content.

10

Another object of the present invention is to provide means for playing back a synopsis, a highlight scene, or a scene desired by the audience within a period of time desired by the user, at the time of selection of the synopsis, the highlight scene, or the desired scene.

15

Still another object of the present invention is to provide means for delivering only a synopsis, a collection of highlight scenes, or a scene desired by the user, within a period of time desired by the user, at the request of the user during the delivery of media content.

20

Yet another object of the present invention is to provide means for controlling the amount of data to be delivered, in accordance with the traffic volume of a line through which the user establishes communication with a server.

To solve the problems of the prior art, according to one 25 aspect of the present invention, there is provided a data

processing device comprising: input means for inputting context description data described in a hierarchical structure, wherein the hierarchical structure comprises the highest hierarchical layer in which time-varying media content and the context of the media content are formed into a single element representing media content; the lowest hierarchical layer in which an element represents a media segment formed by dividing the media content and is assigned, as an attribute, time information relating to a corresponding media segment and a score; and other hierarchical layers include elements which are directly or indirectly associated with at least one of the media segments and which represent scenes or a set of scenes; and selection means for selecting at least one segment from the media content, on the basis of the score assigned to the context description data.

15 Preferably, the data processing device further comprises extraction means for extracting only data corresponding to the segment selected by the selection means, from the media content.

20 Preferably, the data processing device further comprises playback means for playing back only data corresponding to the segment selected by the selection means, from the media content.

25 Preferably, the score represents a contextual importance of media content.

30 Preferably, the score represents the degree of contextual importance of a scene of interest from the viewpoint of a keyword, and the selection means selects a scene in which the score is used

from at least one viewpoint.

Preferably, the media content corresponds to video data or audio data.

Preferably, the media content corresponds to data
5 comprising video data and audio data, which are mutually
synchronized.

Preferably, the context description data describe the configuration of video data or audio data.

Preferably, the context description data describe the
10 configuration of each of video data sets and audio data sets.

Preferably, the selection means selects a scene by reference to context description data pertaining to video data or audio data.

Preferably, the selection means comprises video
15 selection means for selecting a scene of video data by reference to context description data of video data or audio selection means for selecting a scene of audio data by reference to context description data of audio data.

Preferably, the selection means comprises video
20 selection means for selecting a scene of video data by reference to context description data of video data, and audio selection means for selecting a scene of audio data by reference to context description data of audio data.

Preferably, the data to be extracted by the extraction
25 data correspond to video data or audio data.

Preferably, the data to be extracted by the extraction data correspond to data comprising video data and audio data, which are mutually synchronized.

Preferably, media content comprises a plurality of 5 different media data sets within a single period of time. Further, the data processing device further comprises determination means which receives structure description data having a data configuration of the media content described therein and determines which one of the media data sets is to be taken as an 10 object of selection, on the basis of determination conditions to be used for determining data as an object of selection. Moreover, the selection means selects data from only the data sets, which have been determined as objects of selection by the determination means, by reference to the structure description data.

15 Preferably, the data processing device further comprises: determination means which receives structure description data having a data configuration of the media content described therein and determines whether only video data, only audio data, or both video data and audio data are taken as an object 20 of selection, on the basis of determination conditions to be used for determining data as an object of selection. Further, the selection means selects data from only the data sets determined as objects of selection by the determination means, by reference to the structure description data.

25 Preferably, media content comprises a plurality of

different media data sets within a single period of time, and the determination means receives structure description data having a data configuration of the media content described therein and determines which one of the video data sets and/or audio data sets 5 is to be taken as an object of selection. Further, the selection means selects data from only the data sets determined as objects of selection by the determination means, by reference to the structure description data.

Preferably, representative data pertaining to a 10 corresponding media segment are added, as an attribute, to individual elements of context description data in the lowest hierarchical layer. Further, the selection means selects the entire data pertaining to the media segment and/or representative data pertaining to a corresponding media segment.

15 Preferably, the entire data pertaining to the media segment correspond to media data, and the media content comprises a plurality of different media data sets within a single period of time. Preferably, the data processing device further comprises determination means which receives structure 20 description data having a data configuration of the media content described therein and determines which one of the media data sets and/or representative data sets is to be taken as an object of selection; and the selection means selects data from only the data sets determined as objects of selection by the determination means, 25 by reference to the structure description data.

Preferably, the data processing device further comprises: determination means which receives structure description data having a data configuration of the media content described therein and determines whether only the entire data 5 pertaining to the media segment, only the representative data pertaining to the media segment, or both the entire data and the representative data pertaining to a corresponding media segment are taken as objects of selection, on the basis of determination conditions to be used for determining data as an object of 10 selection. Further, the selection means selects data from only the data sets determined as objects of selection by the determination means, by reference to the structure description data.

Preferably, the determination conditions comprise at 15 least one of the capability of a receiving terminal, the traffic volume of a delivery line, a user request, and a user's taste, or a combination thereof.

Preferably, the data processing device further comprises formation means for forming a stream of media content from the 20 data extracted by the extraction means.

Preferably, the data processing device further comprises delivery means for delivering the stream formed by the formation means over a line.

Preferably, the data processing device further comprises 25 recording means for recording the stream formed by the formation

means on a data recording medium.

Preferably, the data processing device further comprises data recording medium management means which re-organizes the media content that has already been stored and/or media content 5 to be newly stored, according to the available disk space of the data recording medium.

Preferably, the data processing device further comprises stored content management means for re-organizing the media content stored in the data recording medium according to the period 10 of storage of the media content.

According to another aspect of the present invention, there is provided a data processing method comprising the steps of: inputting context description data described in a hierarchical structure, wherein the hierarchical structure 15 comprises the highest hierarchical layer in which time-varying media content and the context of the media content are formed into a single element representing media content; the lowest hierarchical layer in which an element represents a media segment formed by dividing the media content and is assigned, as an 20 attribute, time information relating to a corresponding media segment and a score; and other hierarchical layers include elements which are directly or indirectly associated with at least one of the media segments and which represent scenes or a set of scenes; and selecting at least one segment from the media content, 25 on the basis of the score assigned to the context description data.

Preferably, the data processing method further comprises an extraction step for extracting only data corresponding to the segment selected by the selection step, from the media content.

Preferably, the data processing method further comprises 5 a playback step for playing back only data corresponding to the segment selected by the selection step, from the media content.

Preferably, the score represents a contextual importance of media content.

Preferably, the score represents the degree of contextual 10 importance of a scene of interest from the viewpoint of a keyword, and in the selection step there is selected a scene in which the score is used from at least one viewpoint.

Preferably, the media content corresponds video data or 15 audio data.

Preferably, the media content corresponds to data comprising video data and audio data, which are mutually synchronized.

Preferably, the context description data describe the 20 configuration of video data or audio data.

Preferably, the context description data describe the configuration of each of video data sets and audio data sets.

Preferably, in the selection step, a scene is selected 25 by reference to context description data pertaining to video data or audio data.

Preferably, the selection step comprises a video

selection step for selecting a scene of video data by reference to context description data of video data or an audio selection step for selecting a scene of audio data by reference to context description data of audio data.

5 Preferably, the selection step comprises a video the selection step for selecting a scene of video data by reference to context description data of video data, and an audio selection step for selecting a scene of audio data by reference to context description data of audio data.

10 Preferably, the data to be extracted in the extraction step correspond to video data or audio data.

 Preferably, the data to be extracted in the extraction step correspond to data comprising video data and audio data, which are mutually synchronized.

15 Preferably, media content comprises a plurality of different media data sets within a single period of time. Further, the data processing method comprises a determination step of receiving structure description data having a data configuration of the media content described therein and determining which one 20 of the media data sets is to be taken as an object of selection, on the basis of determination conditions to be used for determining data as an object of selection. Further, in the selection step, data are selected from only the data sets, which have been determined as objects of selection by the determination means, 25 by reference to the structure description data.

Preferably, the data processing method further comprises: a determination for receiving structure description data having a data configuration of the media content described therein and determines whether only video data, only audio data, 5 or both video data and audio data are taken as an object of selection, on the basis of determination conditions to be used for determining data as an object of selection. Further, in the selection step, data are selected from only the data sets determined as objects of selection by the determination step, by 10 reference to the structure description data.

Preferably, media content comprises a plurality of different media data sets within a single period of time. Preferably, in the determination step, there are received structure description data having a data configuration of the 15 media content described therein, and a determination is made as to which one of the video data sets and/or audio data sets is to be taken as an object of selection. Further, in the selection step, data are selected from only the data sets determined as objects of selection by the determination step, by reference to 20 the structure description data.

Preferably, representative data pertaining to a corresponding media segment are added, as an attribute, to individual elements of context description data in the lowest hierarchical layer; and in the selection step, there are selected 25 the entire data pertaining to the media segment and/or

representative data pertaining to a corresponding media segment.

Preferably, the entire data pertaining to the media segment correspond to media data, and the media content comprises a plurality of different media data sets within a single period 5 of time. Preferably, the data processing method further comprises a determination step for receiving structure description data having a data configuration of the media content described therein and determining which one of the media data sets and/or representative data sets is to be taken as an object of 10 selection. Further, in the selection step, data are selected from only the data sets determined as objects of selection by the determination step, by reference to the structure description data.

Preferably, the data processing method further 15 comprises: a determination step for receiving structure description data having a data configuration of the media content described therein and determining whether only the entire data pertaining to the media segment, only the representative data pertaining to the media segment, or both the entire data and the 20 representative data pertaining to a corresponding media segment are to be taken as objects of selection, on the basis of determination conditions to be used for determining data as an object of selection. Further, in the selection step, data are selected from only the data sets determined as objects of selection 25 by the determination means, by reference to the structure

description data.

Preferably, the determination conditions comprise at least one of the capability of a receiving terminal, the traffic volume of a delivery line, a user request, and a user's taste, 5 or a combination thereof.

Preferably, the data processing method further comprises a formation step for forming a stream of media content from the data extracted by the extraction step.

Preferably, the data processing method further comprises 10 a delivery step for delivering the stream formed by the formation step over a line.

Preferably, the data processing method further comprises a recording step for recording the stream formed by the formation step on a data recording medium.

15 Preferably, the data processing method further comprises a data recording medium management step for re-organizing the media content that has already been stored and/or media content to be newly stored, according to the available disk space of the data recording medium.

20 Preferably, the data processing method further comprises a stored content management step for re-organizing the media content stored in the data recording medium according to the period of storage of the media content.

According to yet another aspect of the present invention, 25 there is provided a computer-readable recording medium on which

the previously-described data processing method is recorded in the form of a program to be performed by a computer.

According to still another aspect of the present invention, there is provided a program for causing a computer to 5 perform the previously-described data processing method.

In the data processing device, the data processing method, the recording medium, and the program of the present invention, selection means (corresponding to a selection step) selects at least one segment from a media content on the basis of a score 10 appended, as an attribute, to the lowest hierarchical layer or other hierarchical layers of context description data, through use of context description data of hierarchical stratum which comprises the highest hierarchical layer, the lowest hierarchical layer, and other hierarchical layers obtained by input means 15 (corresponding to an input step).

Particularly, the extraction means (corresponding to the extraction step) extracts only the data pertaining to a segment selected by the selection means (corresponding to the selection step).

20 Particularly, the playback means (corresponding to the playback step) plays back only the data pertaining to the segment selected by the selection means (corresponding to the selection step) are played back.

Accordingly, a more important scene can be freely 25 selected from the media content, and the thus-selected important

segment can be extracted or played back. Further, the context description data assume a hierarchical stratum comprising the highest hierarchical layer, the lowest hierarchical layer, and other hierarchical layers. Scenes can be selected in arbitrary 5 units, such as on a per-chapter basis or a per-section basis.

There may be employed various selection formats, such as selection of a certain chapter and deletion of unnecessary paragraphs from the chapter.

In the data processing device, the data processing method, 10 the recording medium, and the program of the present invention, a score represents the degree of contextual importance of media content. So long as the score is set so as to select important scenes, a collection of important scenes of a program, for example, can be readily prepared.

15 Further, so long as the score is set so as to represent the importance of a scene of interest from the viewpoint of keyword, segments can be selected with a high degree of freedom by determination of a keyword. For example, so long as a keyword is determined from a specific viewpoint, such as a character or 20 an event, only the scenes desired by the user can be selected.

In the data processing device, the data processing method, the recording medium, and the program of the present invention, the media content corresponds to video data and/or audio data, and the context description data describe the configuration of 25 respective video data sets and/or audio data sets. The video

selection means (corresponding to the video the selection step) selects a scene by reference to the context description data pertaining to video data. The audio selection means (corresponding to the audio the selection step) selects a scene 5 by reference to the context description data pertaining to audio data.

Further, the extraction means (corresponding to the extraction step) extracts video data and/or audio data.

An important segment can be selected from the video data 10 and/or audio data, and video data and/or audio data pertaining to the thus-selected segment can be extracted.

In the data processing device, the data processing method, the recording medium, and the program of the present invention, in a case where media content comprises a plurality of different 15 media data sets within a single period of time, the determination means (corresponding to the determination step) determines which of the media data sets is to be taken as an object of selection, on the basis of determination conditions to be used for determining data as an object of selection. The selection means 20 (corresponding to the selection step) selects data set from only the data determined by the determination means (corresponding to the determination step).

The determination conditions comprise at least one of the capability of a receiving terminal, the traffic volume of a 25 delivery line, a user request, and a user's taste, or a combination

thereof. For instance, the capability of a receiving terminal corresponds to video display capability, audio playback capability, or a rate at which compressed data are to be decompressed. The traffic volume of a delivery line corresponds
5 to the degree of congestion of a line.

In a case where media content is divided into; for example, channels and layers and different media data sets are assigned to the channels and layers, the determination means (corresponding to the determination step) can determine media
10 data pertaining to an optimum segment according to determination conditions. Accordingly, the selection means (corresponding to the selection step) can select an appropriate amount of media data.

In a case where channels and layers are employed as optimum segments, video data having a standard resolution may be assigned
15 to a channel-1/layer-1 for transporting a motion picture, and video data having a high resolution may be assigned to a channel-1/layer-2. Further, stereophonic data may be assigned to a channel-1 for transporting sound data, and monophonic data may be assigned to a channel-2.

20 In the data processing device, the data processing method, the recording medium, and the program of the present invention, the determination means (corresponding to the determination step) determines whether only the video data, only the audio data, or both video and audio data are to be taken as an object of selection,
25 on the basis of the determination conditions.

Before the selection means (corresponding to the selection step) selects a segment, the determination means (corresponding to the determination step) determines which one of the media data sets is to be taken as an object of selection 5 or whether only the video data, only the audio data, or both video and audio data are to be taken as an object of selection. As a result, the time required by the selection means (corresponding to the selection step) for selecting a segment can be shortened.

In the data processing device, the data processing method, 10 the recording medium, and the program of the present invention, representative data are appended, as an attribute, to individual elements of the context description data in the lowest hierarchical layer, and the selection means selects the entire data pertaining to a media segment and/or representative data 15 pertaining to a corresponding media segment.

In the data processing device, the data processing method, the recording medium, and the program of the present invention, the entire data pertaining to a media segment correspond to media data, and the media content comprises a plurality of different 20 media data sets within a single period of time. The determination means (corresponding to the determination step) determines which one of the media data sets and/or representative data are to be taken as objects of selection, on the basis of structure description data and determination conditions.

25 The media content is divided into; for example, channels

and layers, and different media data sets are assigned to the channels and layers. The determination means can determine media data pertaining to an optimum segment (channel or layer) according to these determination conditions.

5 In the data processing device, the data processing method, the recording medium, and the program of the present invention, the determination means (corresponding to the determination step) determines whether only the entire data pertaining to a corresponding media segment, only the representative data
10 pertaining to the corresponding media segment, or both the entire data and the representative data pertaining to the corresponding media segment are to be taken as objects of selection, on the basis of determination conditions.

Before the selection means (corresponding to the
15 selection step) selects a segment, the determination means (corresponding to the determination step) determines which one of the media data sets is to be taken as an object of selection or whether only the entire data or only the representative data, or both the entire data and the representative data are to be taken
20 as objects of selection. As a result, the time required by the selection means (corresponding to the selection step) for selecting a segment can be shortened.

In the data processing device, the data processing method, the recording medium, and the program of the present invention,
25 formation means (corresponding to the formation step) forms a

stream of media content from the data extracted by the extraction means (corresponding to the extraction step). Accordingly, a stream or file which describes a piece of content corresponding to the thus-selected segment can be prepared.

5 In the data processing device, the data processing method, the recording medium, and the program of the present invention, the delivery means (corresponding to the delivery step) delivers the stream formed by the formation means (corresponding to the formation step) over a line. Therefore, data pertaining to only
10 important segments can be delivered to the user.

 In the data processing device, the data processing method, the recording medium, and the program of the present invention, the data recording medium management means (corresponding to the data recording medium management step) re-organizes the media
15 content that has been stored so far and/or media content to be newly stored, according to the available disk space of the data recording medium. Particularly, in the data processing device, the data processing method, the recording medium, and the program of the present invention, the stored content management means
20 (corresponding to the stored content storage step) re-organizes the media content stored in the data recording medium according to the period of storage of the content. Therefore, a larger amount of media content can be stored in the data recording medium.

BRIEF DESCRIPTION OF THE DRAWINGS

25 FIG. 1 is a block diagram showing a data processing method

according to a first embodiment of the present invention;

FIG. 2 is a diagram showing the structure of context description data according to the first embodiment;

FIG. 3 shows a portion of one example of Document Type Definition (DTD) used for describing the context description data in a computer according to the first embodiment through use of XML, as well as a portion of one example of context description data described through use of DTD according to the first embodiment;

FIGS. 4-9 show continued portions of the context description data of the example shown in FIG. 3;

FIG. 10 shows a portion of one example of the XML document formed by addition of representative data to the context description data shown in FIGS. 3 through 9, as well as a portion of one example of DTD described in Extensible Markup Language (XML) for describing the context description data in a computer;

FIGS. 11-21 show continued portions of the context description data shown in FIG. 10;

FIG. 22 is a descriptive view for describing a method of assigning the degree of importance according to the first embodiment;

FIG. 23 is a flowchart showing processing relating to the selection step according to the first embodiment;

FIG. 24 is a block diagram showing the configuration of the extraction step according to the first embodiment;

FIG. 25 is a flowchart showing processing effected by demultiplexd means in the extraction step according to the first embodiment;

FIG. 26 is a flowchart showing processing effected by 5 video skimming means in the extraction step according to the first embodiment;

FIG. 27 is a schematic representation showing the configuration of an MPEG-1 video stream;

FIG. 28 is a flowchart showing processing effected by 10 audio skimming means in the extraction step according to the first embodiment;

FIG. 29 is a schematic representation showing the configuration of AAUs of the MPEG-1 audio stream;

FIG. 30 is a block diagram showing an application of the 15 media processing method according to the first embodiment;

FIG. 31 is a descriptive view showing processing of the degree of importance according to a second embodiment of the present invention;

FIG. 32 is a flowchart showing processing relating to the 20 selection step according to the second embodiment;

FIG. 33 is a flowchart showing processing relating to the selection step according to a third embodiment of the present invention;

FIG. 34 is a descriptive view for describing a method of 25 assigning the degree of importance according to a fourth

embodiment of the present invention;

FIG. 35 is a flowchart showing processing relating to the selection step according to the fourth embodiment;

FIG. 36 is a block diagram showing a media processing 5 method according to a fifth embodiment of the present invention;

FIG. 37 is a diagram showing the structure of structure description data according to the fifth embodiment;

FIG. 38 is a diagram showing the structure of context description data according to the fifth embodiment;

10 FIG. 39 shows one example of Document Type Definition (DTD) used for describing the structure description data in a computer according to the fifth embodiment through use of XML, as well as one example of a XML document, according to the fifth embodiment;

15 FIG. 40 shows a first half of one example of Document Type Definition (DTD) used for describing the context description data in a computer according to the fifth embodiment through use of XML, as well as a first half of one example of an XML document, according to the fifth embodiment;

20 FIGS. 41-45 show continued portions of the context description data shown in Fig. 40;

FIG. 46 shows one example of an output in the selection step according to the fifth embodiment;

FIG. 47 is a block diagram showing the extraction step 25 according to the fifth embodiment;

FIG. 48 is a flowchart showing processing effected by interface means in the extraction step according to the fifth embodiment;

5 FIG. 49 shows one example of a result produced when the interface means provided in the extraction step converts the output in the selection step according to the fifth embodiment;

FIG. 50 is a flowchart showing processing effected by demultiplex means in the extraction step according to the fifth embodiment;

10 FIG. 51 is a flowchart showing processing effected by video skimming means in the extraction step according to the fifth embodiment;

FIG. 52 is a flowchart showing processing effected by audio skimming means in the extraction step according to the fifth embodiment;

15 FIG. 53 is another flowchart showing processing effected by video skimming means in the extraction step according to the fifth embodiment;

FIG. 54 is a block diagram showing a data processing method according to a sixth embodiment of the present invention;

FIG. 55 is a block diagram showing the formation step and the delivery step according to the sixth embodiment;

FIG. 56 is a block diagram showing a media processing method according to a seventh embodiment of the present invention;

25 FIG. 57 is a diagram showing the structure of context

description data according to the fifth embodiment;

FIG. 58 shows a portion of one example of Document Type Definition (DTD) used for describing context description data in a computer according to a seventh embodiment through use of XML, 5 as well as a portion of one example of context description data described through use of XML, according to the seventh embodiment;

FIGS. 59-66 show continued portions of the context description data shown in FIG. 58;

FIG. 67 shows a portion of one example of the XML document 10 formed by addition of representative data to the context description data shown in FIGS. 58 through 66, as well as a portion of one example of DTD described in XML for describing the context description data in a computer;

FIGS. 68-80 show continued portions of the context 15 description data shown in FIG. 67;

FIG. 81 is a flowchart showing processing pertaining to the selection step according to the seventh embodiment;

FIG. 82 is a block diagram showing an application of the media processing method according to the seventh embodiment;

FIG. 83 is a flowchart showing processing pertaining to 20 the selection step according to an eighth embodiment of the present invention;

FIG. 84 is a flowchart showing processing pertaining to 25 the selection step according to an ninth embodiment of the present invention;

FIG. 85 is a flowchart showing processing pertaining to the selection step according to a tenth embodiment of the present invention;

5 FIG. 86 is a block diagram showing a data processing method according to a twelfth embodiment of the present invention;

FIG. 87 is a diagram showing the structure of context description data according to the twelfth embodiment;

10 FIG. 88 shows a portion of one example of Document Type Definition (DTD) used for describing context description data in a computer according to the fifth embodiment through use of XML, as well as a portion of one example of an XML document, according to the fifth embodiment;

FIGS. 89-96 show continued portions of the context description data shown in FIG. 88;

15

FIG. 97 is a block diagram showing a data processing method according to a thirteenth embodiment of the present invention;

FIG. 98 is a block diagram showing a data processing method according to a fourteenth embodiment of the present invention;

20 FIG. 99 is a block diagram showing a data processing method according to a fifteenth embodiment of the present invention;

FIG. 100 is a block diagram showing a data processing method according to a sixteenth embodiment of the present invention;

25 FIG. 101 is a block diagram showing a data processing

method according to a seventeenth embodiment of the present invention;

FIG. 102 is a descriptive view showing channels and layers;

5 FIG. 103 shows a portion of one example of Document Type Definition (DTD) used for describing structure description data through use of XML, as well as a portion of one example of the structure description data described in DTD;

10 FIG. 104 shows a continued portion of the structure description data shown in FIG. 103;

FIG. 105 is a flowchart showing processing pertaining to the determination step in example 1 according to a seventeenth embodiment of the present invention;

15 FIG. 106 is a flowchart showing determination processing to be performed, in response to a user request, in the determination step of example 1 according to the seventeenth embodiment;

20 FIG. 107 is a flowchart showing determination processing pertaining to video data in the determination step of example 1 according to the seventeenth embodiment;

FIG. 108 is a flowchart showing determination processing pertaining to sound data in the determination step of example 1 according to the seventeenth embodiment;

25 FIG. 109 is a flowchart showing a first half of processing pertaining to the determination step in example 2 according to

a seventeenth embodiment of the present invention;

FIG. 110 is a flowchart showing a second half of processing pertaining to the determination step in example 2 according to a seventeenth embodiment of the present invention;

5 FIG. 111 is a flowchart showing processing pertaining to the determination step in example 3 according to a seventeenth embodiment of the present invention;

10 FIG. 112 is a flowchart showing determination processing pertaining to video data in the determination step of example 3 according to the seventeenth embodiment;

15 FIG. 113 is a flowchart showing determination processing pertaining to sound data in the determination step of example 3 according to the seventeenth embodiment;

20 FIG. 114 is a flowchart showing a first half of processing pertaining to the determination step in example 4 according to a seventeenth embodiment of the present invention;

FIG. 115 is a flowchart showing a second half of processing pertaining to the determination step in example 4 according to a seventeenth embodiment of the present invention;

25 FIG. 116 is a flowchart showing determination processing to be performed, in response to a user request, in the determination step of example 4 according to the seventeenth embodiment;

FIG. 117 is a flowchart showing determination processing pertaining to video data in the determination step of example 4

according to the seventeenth embodiment;

FIG. 118 is a flowchart showing determination processing pertaining to sound data in the determination step of example 4 according to the seventeenth embodiment;

5 FIG. 119 is a flowchart showing a first half of processing pertaining to the determination step in example 5 according to a seventeenth embodiment of the present invention;

FIG. 120 is a flowchart showing a second half of processing pertaining to the determination step in example 5 according to 10 a seventeenth embodiment of the present invention;

FIG. 121 is a flowchart showing determination processing to be performed, in response to a user request, in the determination step of example 5 according to the seventeenth embodiment;

15 FIG. 122 is a block diagram showing a data processing method according to a eighteenth embodiment of the present invention;

FIG. 123 is a block diagram showing a data processing method according to a nineteenth embodiment of the present 20 invention;

FIG. 124 is a block diagram showing a data processing method according to a twentieth embodiment of the present invention;

25 FIG. 125 is a block diagram showing a data processing method according to a twenty-first embodiment of the present

invention;

FIG. 126 is a block diagram showing a data processing method according to a twenty-second embodiment of the present invention;

5 FIG. 127 shows one example of a DTD into which context description data and structure description data are to be merged, as well as one example of an XML document;

FIGS. 128-132 continued portions of the XML document shown in FIG. 127;

10 FIG. 133 is an illustration showing the structure of context description data according to an eleventh embodiment of the present invention;

FIG. 134 is an illustration showing a viewpoint employed in the eleventh embodiment;

15 FIG. 135 is an illustration showing the degree of importance according to the eleventh embodiment;

FIG. 136 is an example of DTD used for describing the context description data of the eleventh embodiment through use of XML to be used in expressing the context description data in 20 a computer, and an example of a portion of the context description data described in XML;

FIGS. 137 to 163 show continued portions of the context description data shown in FIG. 136;

25 FIG. 164 is another example of DTD used for describing the context description data of the eleventh embodiment through

use of XML to be used in expressing the context description data in a computer, and an example of a portion of the context description data described in XML;

FIGS. 165 to 196 show continued portions of the context
5 description data shown in FIG. 164;

FIG. 197 is an illustration showing another structure of context description data according to an eleventh embodiment of the present invention;

FIG. 198 is an example of DTD used for describing the
10 context description data (corresponding to Fig. 197) of the eleventh embodiment through use of XML to be used in expressing the context description data in a computer, and an example of a portion of the context description data described in XML;

FIGS. 199 to 222 show continued portions of the context
15 description data shown in FIG. 164;

FIG. 223 is another example of DTD used for describing the context description data (corresponding to Fig. 197) of the eleventh embodiment through use of XML to be used in expressing the context description data in a computer, and an example of a
20 portion of the context description data described in XML; and

FIGS. 224 to 252 show continued portions of the context description data shown in FIG. 164.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

Embodiments of the present invention will be described
25 hereinbelow by reference to the accompanying drawings.

[First Embodiment]

A first embodiment of the present invention will now be described. In the present embodiment, a motion picture of MPEG-1 system stream is taken as media content. In this case, a media 5 segment corresponds to a single scene cut, and a score represents the objective degree of contextual importance of a scene of interest.

FIG. 1 is a block diagram showing a data processing method according to the first embodiment of the present invention. In 10 FIG. 1, reference numeral 101 designates the selection step; and 102 designates an extraction step. In the selection step 101, a scene of media content is selected from context description data, and the start time and the end time of the scene are output. In the extraction step 102, data pertaining to a segment of media 15 content defined by the start time and the end time output in the selection step 101 are extracted.

FIG. 2 shows the configuration of the context description data according to the first embodiment. In the present embodiment, the context is described according to a tree structure. Elements 20 within the tree structure are arranged in chronological sequence from left to right. In FIG. 2, the root of the tree designated <contents> represents a single portion of content, and the title of the content is assigned to the root as an attribute.

Children of <program> are designated by <section>. 25 Priority representing the degree of contextual importance of a

scene of interest is appended to the element <section> as an attribute. The degree of importance assumes an integral value ranging from 1 to 5, where 1 designates the least degree of importance and 5 designates the greatest degree of importance.

5 Children of <section> are designated by <section> or <segment>. Here, an element <section> per se can be taken as a child of another child <section>. However, a single element <section> cannot have a mixture of children <section> and children <segment>.

10 An element <segment> represents a single scene cut and is assigned a priority identical with that assigned to its parent <section>. Attributes appended to <segment> are "start" representing the start time and "end" representing the end time. Scenes may be cut through use of commercially-available software
15 or software available over a network. Alternatively, scenes may be cut manually. Although in the present embodiment time information is expressed in terms of the start time and the end time of a scene cut, a similar result is realized when time information is expressed in terms of the start time of the scene
20 of interest and the duration of the scene of interest. In this case, the end time of the scene of interest is obtained by addition of the duration to the start time.

In the case of a story such as a movie, chapters, sections, and paragraphs of the story can be described on the basis of the
25 context description data, through use of elements <section>

within a multilayer hierarchical stratum. In another example, when a baseball game is described, elements <section> in the highest hierarchical level may be used for describing innings, and their children <section> may be used for describing half 5 innings. Further, second-generation descendant <section> of the elements <section> may be used for describing at-bats of respective batters, and third-generation descendant <section> of the elements <section> are also used for describing each pitch, a time period between pitches, and batting results.

10 The context description data having such a configuration may be expressed in a computer through use of, e.g., Extensible Markup Language (XML). XML is a data description language whose standardization is pursued by the World Wide Web Consortium. Recommendations Ver. 1.0 were submitted on February 10, 1998. 15 Specifications of XML Ver. 1.0 can be acquired from <http://www.w3.org/TR/1998/REC-xml-19980210>. FIGS. 3 through 9 show one example of Document Type Definition (DTD) used for describing the context description data according to the present embodiment through use of XML, and one example of context 20 description data described through use of DTD. FIGS. 10 through 19 show one example of context description data prepared by addition of representative data (dominant-data) of a media segment, such as a representative image (i.e., video data) and a keyword (audio data), to the context description data shown in 25 FIGS. 3 through 9, and a DTD used for describing the context

description data through use of XML.

Processing relating to the selection step 101 will now be described. Processing pertaining to the selection step 101 closely relates to the format of context description data and a 5 method of assigning a score to contents of a context of each scene.

In the present embodiment, processing pertaining to the selection step 101 is effected by focusing on only elements <section> having children <segment>, as shown in FIG. 22 (steps S1, S4, and S5 shown in FIG. 23). An element <section> whose priority exceeds a 10 certain threshold value is selected (step S2 shown in FIG. 23), and the start time and end time of the thus-selected element <section> are output (step S3 shown in FIG. 23). The priority assigned to the element <section> having children <segment> corresponds to the degree of importance shared among all the 15 elements <section>, each of which has children <segment>, within the content. More specifically, the degree of importance shared among the elements <section> enclosed by a dotted line shown in FIG. 22 is set as priority. Priority assigned to elements <section> and <segment> other than the foregoing elements 20 <section> is set arbitrarily. The degree of importance are not necessarily set so as to assume unique values, and the same degree of importance may be assigned to different elements. FIG. 23 is a flowchart showing processing relating to the selection step 101 according to the first embodiment. With regard to the thus- 25 selected element <section>, the start time and end time of scene

expressed by the element <section> are determined from elements <segment>, which are children of the thus-selected element <section>. The thus-determined start time and end time are output.

5 Although in the present embodiment selection is effected by focusing on the elements <section>, each of which has children <segment>, selection may be effected by focusing on elements <segment>. In this case, priority corresponds to the degree of importance shared among all the elements <segment> within the
10 content. Alternatively, selection may be effected by focusing on elements <section> of the same hierarchical level from among the elements <section> of higher hierarchical levels having no children <segment>. More specifically, selection may be effected by focusing on the elements <section> in the same path
15 number, which is counted from a given parent <contents> or a given child <segment>.

Processing relating to the extraction step 102 will now be described by reference to FIG. 24. FIG. 24 is a block diagram showing the extraction step 102 according to the first embodiment.
20 As shown in FIG. 24, the extraction step 102 according to the first embodiment is realized by demultiplex means 601, video skimming means 602, and audio skimming means 603. In the present embodiment, an MPEG-1 system stream is taken as media content. The MPEG-1 system stream is formed by multiplexing a video stream
25 and an audio stream into a single stream. The demultiplex means

601 separates the video stream and the audio stream from the multiplexed system stream. The video skimming means 602 receives the thus-separated video stream and a segment selected in the selection step 101, and from the received video stream outputs 5 only data pertaining to the thus-selected segment. The audio skimming means 603 receives the separated audio stream and the segment selected in the selection step 101, and from the received audio stream outputs only data pertaining to the selected segment.

The processing performed by the demultiplex means 601 10 will now be described by reference to the accompanying drawings.

FIG. 25 is a flowchart relating to processing effected by the demultiplex means 610. The method of multiplexing the MPEG-1 system stream is standardized under International Standard ISO/IEC IS 11172-1. A video stream and an audio stream are 15 multiplexed into packets by means of dividing the video and audio streams into streams of appropriate length called packets and by appending additional information, such as a header, to each of the packets. A plurality of video streams and a plurality of audio streams may also be multiplexed into a single signal in the same 20 manner. In the header of each packet, there are described a stream ID for identifying a packet as a video stream or an audio stream, and a time stamp for bringing video data into synchronization with audio data. The stream ID is not limited to use for identifying a packet as a video stream or an audio stream. When a plurality 25 of video streams are multiplexed, the stream ID can be used for

identifying, from a plurality of video streams, the video stream to which a packet of interest belongs. Similarly, when a plurality of audio streams are multiplexed, the stream ID can be used for identifying, from a plurality of audio streams, the audio stream which a packet of interest belongs. In the MPEG-1 system, a plurality of packets are bundled into a single pack, and to the pack is appended, as a header, a multiplex rate and additional information for use as a reference time used for effecting synchronous playback. Further, additional information relating 5 to the number of multiplexed video and audio streams is appended, as a system header, to the head pack. The demultiplex means 601 reads the number of multiplexed video and audio streams from the system header of the head pack (S1 and S2) and ensures data locations for storing data sets of the respective streams (S3 and 10 S4). Subsequently, the demultiplex means 601 examines the stream 15 ID of each of the packets and writes the data included in the packet into the data location where the stream specified by the stream ID is stored (S5 and S6). All the packets are subjected to the foregoing processing (S8, S9, and S10). After all the packets 20 have been subjected to the processing, the video streams are output to the video skimming means 602 on a per-stream basis, and the audio streams are output to the audio skimming means 603 in the same manner (S11).

The operation of the video skimming means 602 will be 25 described hereinbelow. FIG. 26 is a flowchart relating to

processing effected by the video skimming means 602. The MPEG-1 system stream is standardized under International Standard ISO/IEC IS 11172-2. As shown in FIG. 27, the video stream comprises a sequence layer, a group-of-pictures (GOP) layer, a 5 picture layer, a slice layer, a macro block layer, and a block layer. Random access is made on the basis of GOP layer, which is the minimum unit, and each layer included in the picture layer corresponds to a single frame. The video skimming means 602 processes data on a per-GOP basis. A counter C for counting the 10 number of output frame is initialized to 0 (S3). First, the video skimming means 602 acknowledges that the header of the video stream corresponds to the header of the sequence layer (S2 and S4) and stores data included in the header (S5). Subsequently, video skimming means outputs the data. The header of the sequence layer 15 may appear during subsequent processes. The value of the header is not allowed to be changed unless the value is relevant to a quantization matrix. Therefore, every time the sequence header is input, the value of the input header is compared with the value of the stored header (S8 and S14). If the input header differs 20 from the stored header in terms of a value other than the value relevant to the quantization matrix, the input header is considered an error (S15). Subsequently, the video skimming means 602 detects the header of the GOP layer of the input data (S9). Data pertaining to a time code are described in the header 25 of the GOP layer (S10), and the time code describes the period

of time which has elapsed from the head of the sequence. The video skimming means 602 compares the time code with the segment output in the selection step 101 (S1) (S11). If the time code is determined not to be included in the segment, the video skimming 5 means 602 discards all the data sets appearing before the next GOP layer of the sequence layer. In contrast, if the time code is included in the selected segment, the video skimming means 602 outputs all the data sets appearing before the next GOP layer of the sequence layer (S13). In order to ensure continuity the data 10 sets which have already been output, and the data sets currently being output, the time code of the GOP layer must be changed (S12). A value to which the time code of the GOP layer is to be changed is computed through use of the value of the counter C. The counter C retains the number of frames which have already been output. 15 In accordance with Eq. 1, the time T_v at which the header frame of the GOP layer to be currently output is displayed is computed from C, as well as from a picture rate "pr" which is described in the sequence header and represents the number of frames to be displayed per second.

$$20 \quad T_v = \frac{C}{pr} \quad \dots (1)$$

" T_v " designates a value in units of $1/pr$ sec, and hence the value of T_v is converted in accordance with the format of the time code of the MPEG-1. the thus-converted value is set in the time code of the GOP layer which is to be output at this time.

When the data pertaining to the GOP layer are output, the number of output picture layers is added to the value of the counter C. The foregoing processing is performed repeatedly until the end of the video stream (S7 and S16). In a case where the demultiplex 5 means 601 outputs a plurality of video streams, the processing is performed for each of the video streams.

Processing of the audio skimming means 603 will now be described. FIG. 28 is a flowchart relating to processing effected by the audio skimming means 603. The MPEG-1 audio stream is 10 standardized under International Standard ISO/IEC IS 11172-3.

The audio stream is formed from a series of frames called audio access units (AAUs). FIG. 29 shows the structure of an AAU. The AAU is the minimum unit at which audio data can be decoded independently and comprises a given number of sampled data sets 15 Sn. The playback time of a single AAU can be computed from a bit rate "br" representing the transmission rate; a sampling frequency Fs; and the number of bits, L, of the AAU. First, the header of the AAU included in the audio stream is detected (S2 and S5), thereby obtaining the number of bits, L, of a single AAU. 20 Further, the bit rate "br" and the sampling frequency Fs are described in the header of the AAU. The number of samples, Sn, of a single AAU is calculated in accordance with Eq. 2.

$$Sn = \frac{L \times Fs}{br} \quad \dots (2)$$

The playback time Tu of a single AAU is computed in 25 accordance with Eq. 3.

$$Tu = \frac{Sn}{Fs} = \frac{L}{br} \quad \dots (3)$$

So long as the value of Tu is computed, the time which has elapsed from the head of the stream can be obtained by counting the number of AAUs. The audio skimming means 603 counts the number 5 of AAUs which have already appeared and calculates the time which has elapsed from the head of the stream (S7). The thus-calculated time is compared with the segment output in the selection step 101 (S8). If the time at which the AAU appears is included in the selected segment, the audio skimming means 603 outputs all 10 the data sets relating to that AAU (S9). In contrast, if the time at which the AAU appears is not included in the selected segment, the audio skimming means 603 discards the data sets pertaining to the AAU. The foregoing processing is performed repeatedly until the end of the audio stream (S6 and S11). When the 15 demultiplex means 601 outputs a plurality of audio streams, each of the audio streams is subjected to the previously-described processing.

As shown in FIG. 30, the video stream output from the extraction step 102 is input to video playback means, and the audio stream output from the extraction step 102 is input to audio playback means. The video stream and the audio stream are played back synchronously, thereby enabling playback of a synopsis or a highlight scene of media content. Further, the thus-produced video and audio streams are multiplexed, thereby enabling 25 preparation of an MPEG-1 system stream relating to a synopsis of

the media content or a collection of highlight scenes of the same.

[Second Embodiment]

A second embodiment of the present invention will now be described. The second embodiment differs from the first 5 embodiment only in terms of processing relating to the selection step.

Processing relating to the selection step 101 according to the second embodiment will now be described by reference to the drawings. In the selection step 101 according to the second 10 embodiment, the priority values assigned to all the elements ranging from <section> of the highest hierarchical level to leaves <segment> are utilized. The priority assigned to each of the elements <section> and <segment> represents the objective degree of contextual importance. Processing relating to the selection 15 step 101 will now be described by reference to FIG. 31. In FIG. 31, reference numeral 1301 designates one of elements <section> of the highest hierarchical level included in the context description data; 1302 designates a child element <section> of the element <section> 1301; 1303 designates a child element 20 <section> of the element <section> 1302; and 1304 designates a child element <segment> of the element <section> 1303. In the selection step 101 according to the second embodiment, an arithmetic mean of all the priority values assigned to the path extending from the leaf <segment> to its ancestor <section> of 25 the highest hierarchical level is calculated. When arithmetic

means of the path exceeds a threshold value, the element <segment> is selected. In the example shown in FIG. 28, an arithmetic mean "pa" of the attributes of elements: <segment> 1304, <section> 1303, <section> 1302, and <section> 1301; i.e., the arithmetic mean of 5 their attribute priority values p_4 , p_3 , p_2 , and p_1 , is calculated.

The arithmetic mean "pa" is calculated in accordance with Eq.

4.

$$pa = \frac{p_1 + p_2 + p_3 + p_4}{4} \quad \dots \quad (4)$$

The thus-calculated "pa" is compared with the threshold 10 value (S1 and S2). If "pa" exceeds the threshold value, <segment> 1304 is selected (S3), and the attribute values relating to "start" and "end" of <segment> 1304 are output as the start time and end 15 time of the selected scene (S4). All the elements <segment> are subjected to the foregoing processing (S1 and S6). FIG. 32 is 15 a flowchart showing processing relating to the selection step 101 according to the second embodiment.

In the second embodiment, an arithmetic mean of the priority value assigned to the <segment> of the lowest 20 hierarchical level up to the priority value assigned to its ancestor <section> of the highest hierarchical level is calculated, and the leaf <segment> is selected on the basis of the thus-calculated arithmetic mean. Alternatively, there may be calculated an arithmetic mean of the priority values assigned to the element <section> having a child <segment> up to the 25 priority value assigned to its ancestor <section> of the highest

hierarchical level, and the element <section> having the child <segment> may be selected by comparing the thus-calculated arithmetic mean with the threshold value. Similarly, in another hierarchical stratum, an arithmetic mean of the priority value 5 assigned to an element <section> up to the priority value assigned to its ancestor <section> of the highest hierarchical level is calculated, and the thus-calculated arithmetic mean is compared with the threshold value, whereby the element <section> in the hierarchical stratum may be selected.

10

[Third Embodiment]

A third embodiment of the present invention will now be described. The third embodiment differs from the first embodiment only in terms of the processing relating to the selection step.

15

The processing relating to the selection step 101 according to the third embodiment will be described by reference to the drawings. As in the case of the processing described in connection with the first embodiment, in the selection step 101 according to the third embodiment, selection is effected by 20 focusing on only the elements <section>, each of which has a child <segment>. In the third embodiment, there is set a threshold value with regard to the sum of the duration periods of all the scenes to be selected. More specifically, elements <section> are selected in decreasing order of priority value, until the sum of 25 the duration periods of the elements <section> that have been

selected so far is maximized but remains smaller than the threshold value. FIG. 33 is a flowchart of processing pertaining to the selection step 101 according to the third embodiment. A collection of elements <section>, each of which has children 5 <segment>, is taken as a set Ω (S1). The elements <section> of the set Ω are sorted in descending order of attributes priority (S2). The element <section> having the highest priority value is selected from the set Ω (S4 and S5), and the thus-selected element <selection> is eliminated from the set Ω . The start time 10 and end time of the thus-selected element <section> are obtained by examination of all the children <segment> of the element <section>, and a duration of the element <section> is calculated (S6). The sum of the duration periods of the elements <section> which have been selected so far is calculated (S7). If the sum 15 exceeds the threshold value, processing is completed (S8). If the sum is lower than the threshold value, the start time and the end time of the element <section> selected this time are output (S9). Processing then returns to a step in which the element <section> having the highest priority value is selected from the 20 set Ω . The above-described processing is repeated until the sum of duration periods of the selected elements <section> exceeds the threshold value or the set Ω becomes empty (S4 and S8).

In the third embodiment, selection is effected by focusing on the element <section> having children <segment>.

However, selection may be effected by focusing on elements <segment> in place of the elements <section>. In this case, a priority value corresponds to the degree of importance shared among all the elements <segment> within the media content.

5 Further, selection may be effected by focusing on the elements <section> having no children <segment> within the same hierarchical level. More specifically, selection may be effected by focusing on the elements <section> located in the same path, which is counted from the ancestor <contents> or a leaf

10 <segment>.

As in the case of the second embodiment, the priority values assigned to the respective elements <section> and <segment> are taken as the objective degree of contextual importance, and the arithmetic mean "pa" of all the priority values assigned to the element <segment> up to its ancestor <section> of the highest hierarchical level is calculated. Elements <section>, each having children <segment>, or elements <segment> are selected in descending order of "pa" until the sum of duration periods is maximized but remains smaller than the threshold value.

15 Even in this case, the same advantageous result as that yielded in the second embodiment is achieved.

[Fourth Embodiment]

A fourth embodiment of the present invention will now be described. The fourth embodiment differs from the first embodiment only in terms of the processing relating to the

selection step.

Processing relating to the selection step 101 according to the fourth embodiment will now be described by reference to the drawings. As in the case of the selection performed in the 5 selection step 101 in the first embodiment, selection relating to the selection step 101 in the fourth embodiment is effected by focusing on an element <segment> and an element <section> having children <segment>. As in the case of the third embodiment, a threshold value is set with regard to the sum of duration periods 10 of all scenes to be selected in the present embodiment. As in the case of the first embodiment, the priority value assigned to the element <section> having children <segment> corresponds to the degree of importance shared among all the elements <section>, each of which has children <segment>, within the media content. 15 More specifically, the priority value is taken as a degree of importance shared among the elements <section> enclosed by a dotted line shown in FIG. 34. Further, the priority value assigned to the element <segment> corresponds to the degree of importance shared among the elements <segment> sharing the same 20 parent element <section>; that is, the degree of importance shared among the elements <segment> enclosed by one of the dashed lines shown in FIG. 34.

FIG. 35 is a flowchart showing processing relating to the selection step 101 according to the fourth embodiment. A 25 collection of elements <section>, each of which has children

<segment>, is taken as set Ω (S1). The elements <section> within the set Ω are sorted in descending order of priority (S2). Subsequently, the element <section> having the highest priority value is selected from the set Ω (S3, S4, and S5). If a plurality 5 of elements <section> have the highest priority value, all the elements are selected. The thus-selected elements <section> are taken as elements of another set Ω' and are eliminated from the set Ω . The start time, the end time, and a duration of a scene represented by the thus-selected element <section> are obtained 10 and stored in advance by examination of the children <segment> of the element <section> (S6). If the plurality of elements <section> are selected, the start time, the end time, and the duration of each of the scenes represented by the respective elements are obtained and stored in advance. The sum of duration 15 periods of the elements <section> of the set Ω' is obtained (S7 and S8). The sum is compared with a threshold value (S9). If the sum of duration periods is equal to the threshold value, all the data sets which pertain to the start time and the end time and have been stored so far are output, and processing is 20 terminated (S10). In contrast, if the sum of duration periods is lower than the threshold value, processing again returns to the selection of an element <section> from the set Ω (S4 and S5). If the set Ω is empty, all the data sets pertaining to the start time and the end time that are stored are output, and processing

is terminated (S4). If the sum of duration periods exceeds the threshold value, the following processing is performed. Specifically, the element <section> having the minimum priority is selected from the set Ω' (S11). At this time, if a plurality 5 of elements <section> have the minimum priority, all the elements are selected. Of the children <segment> of the thus-selected elements <section>, the children <segment> having the minimum priority are deleted (S12). The start time, the end time, and the duration of the element <section> corresponding to the 10 thus-eliminated children <segment> are changed (S13). As a result of deletion of the elements <segment>, scenes may be interrupted. In such a case, for each of the scenes, which have been interrupted, the start time, the end time, and a duration are stored. Further, if, as a result of deletion of the children 15 <segment>, all the children of an element <section> are deleted, the element <section> is deleted from the set Ω' . If the plurality of elements <section> are selected, all the elements are subjected to the previously-described processing. As a result of deletion of the children <segment>, the duration of the element <section> 20 from which the children <segment> have been deleted becomes shorter, in turn reducing the sum of duration periods. Such deletion processing is performed repeatedly until the sum of duration periods of the elements of the set Ω' becomes lower than the threshold value. When the sum of the duration periods of the 25 elements of the set Ω' becomes lower than the threshold value

(S14), all the data sets which pertain to the start time and the end time and have been stored are output, and processing is terminated (S15).

Although in the fourth embodiment selection is effected 5 by focusing on the elements <section>, each of which has children <segment>, or elements <segment>, selection may also be effected by focusing on an element <section> and its children <section> or an element <section> and its children <segment>. Even in such a case, the same advantageous result as that yielded by the fourth 10 embodiment is achieved.

With regard to deletion of the elements <segment> effected when the sum of duration periods exceeds the threshold value, in the present embodiment the elements <section> are deleted in ascending sequence of priority from the lowest priority. 15 However, a threshold value may be set for the priority of elements <section>, and the children <segment> having the minimum priority may be deleted from all the elements <section> which are lower than the threshold value. Alternatively, another threshold value may be set for the priority of elements <segment>, 20 and elements <segment> whose priority is lower than the threshold value may be deleted.

[Fifth Embodiment]

A fifth embodiment of the present invention will now be described by reference to the accompanying drawings. In the 25 present embodiment, a motion picture of MPEG-1 format is taken

as media content. In this case, a media segment corresponds to a single scene cut, and a score corresponds to the objective degree of contextual importance of a scene of interest.

FIG. 36 is a block diagram showing a media processing 5 method according to the fifth embodiment of the present invention.

In FIG. 36, reference numeral 1801 designates a selection step; 1802 designates an extraction step; 1803 designates a formation step; 1804 designates a delivery step; and 1805 designates a database. In the selection step 1801, a scene of media content 10 is selected from context description data, and there are output data pertaining to the start time and the end time of the thus-selected scene, as well as data representing a file where the data are stored. In the extraction step 1802, there are received the data sets representing the start time and the end 15 time of the scene and the data sets representing the file output in the selection step 1801. Further, in the extraction step 1802, by reference to the structure description data, data pertaining to the segment defined by the start time and the end time output in the selection step 1801 are extracted from the file of media 20 content. In the formation step 1803, the data output in the extraction step 1802 are multiplexed, thus configuring a system stream of MPEG-1 format. In the delivery step 1804, the system stream of MPEG-1 format prepared in the formation step 1803 is delivered over a line. Reference numeral 1805 designates a 25 database where media content, structure description data thereof,

and context description data are stored.

FIG. 37 shows the configuration of the structure description data according to the fifth embodiment. In the present embodiment, the physical contents of the data are described in a tree structure. With regard to the nature of storage of media content in the database 1805, a single piece of media content is not necessarily stored in the form of a single file. In some cases, a single piece of media content may be stored in a plurality of separate files. The root of the tree structure of structure description data is depicted as <contents> and represents a single piece of content. The title of a corresponding piece of content is appended to the root <contents> as an attribute. A children of <contents> corresponds to <mediaobject>, which represents a file where the media content is stored. The child <mediaobject> is appended, as an attribute, to a link "locator" representing a link to the file where the media content is stored and an identifier ID representing a link to context description data. In a case where media content is constituted of a plurality of files, "seq" is appended to the element <mediaobject> as an attribute for representing the sequence of a file of interest within the media content.

FIG. 38 shows the configuration of the context description data according to the fifth embodiment. The context description data of the present embodiment corresponds to the context description data of the first embodiment appended with

a link to the element <mediaobject> of the structure description data. More specifically, the root <contents> of the context description data has a child <mediaobject>, and the element <mediaobject> has a child <section>. Elements <section> and 5 <segment> are identical with those used in the first embodiment.

The element <mediaobject> of the structure description data is associated with the element <mediaobject> of the context description data. Scenes of the media content described by means of children of the element <mediaobject> of the context 10 description data are stored in a file designated by the element <mediaobject> of the structure description data having the attribute ID of the same value. Further, time information "start" and "end" assigned to an element "segment" sets the time which has elapsed from the head of each file. Specifically, in a case 15 where a single piece of media content comprises a plurality of files, the time at the head of each file corresponds to 0, and the start time of each scene is represented by the time which has elapsed from the head of the file to a scene of interest.

The structure description data and the context 20 description data may be expressed in a computer through use of, e.g., Extensible Markup Language (XML). FIG. 39 shows one example of Document Type Definition (DTD) used for describing the structure description data shown in FIG. 37 through use of XML, as well as one example of structure description data described 25 through use of DTD. FIGS. 40 through 45 show DTD used for

describing the context description data shown in FIG. 38 through use of XML and one example of the context description data described by DTD.

Processing relating to the selection step 1801 will now 5 be described. In the selection step 1801, any one of the methods described in connection with the first through fourth embodiments is adopted as a method of selecting a scene. A link to <object> of structure description data is eventually output simultaneously with output of the start time and the end time of a selected scene. 10 FIG. 46 shows one example of data output from the selection step 1801 in a case where the structure description data are described in the form of an XML document through use of the DTD shown in FIG. 39 and where the context description data are described in the form of an XML document through use of the DTD shown in FIGS. 15 40 and 45. In FIG. 46, "id" is followed by an ID of an element <mediaobject> of structure description data; "start" is followed by the start time; and "end" is followed by the end time.

Processing relating to the extraction step 1802 will now be described. FIG. 47 is a block diagram showing the extraction 20 step 1802 according to the fifth embodiment. In FIG. 47, the extraction step 1802 according to the fifth embodiment is embodied by interface means 2401, demultiplex means 2402, video skimming means 2403, and audio skimming means 2404. The interface means 2401 receives structure description data and a segment output in 25 the selection step 1801, extracts a file of media content from

the database 1805, outputs the thus-extracted file to the demultiplex means 2402, and outputs to the video skimming means 2403 and the audio skimming means 2404 the start time and end time of the segment output in the selection step 1801. Media content 5 of the present embodiment corresponds to a system stream of MPEG-1 format into which a video stream and an audio stream are multiplexed. Accordingly, the demultiplex means 2402 separates the system stream of MPEG-1 format into the video stream and the audio stream. The thus-separated video stream and the segment 10 output from the interface means 2401 are input to the video skimming means 2403. From the input video stream, the video skimming means 2403 outputs only the data pertaining to the selected segment. Similarly, the audio stream and the segment output in the selection step 2402 are input to the audio skimming 15 means 2404. From among the input audio stream, the audio skimming means 2402 outputs only the data pertaining to the selected segment.

Processing relating to the interface means 2401 will now be described. FIG. 48 is a flowchart showing processing effected 20 by the interface means 2401. Structure description data pertaining to corresponding content and the segment output in the selection step 1801, as shown in FIG. 46, are input to the interface means 2401. Chronological order of files is acquired from the attribute "id" assigned to the element <mediaobject> of the 25 structure description data, and hence the segments output in the

selection step 1801 are sorted in chronological sequence and in order of "id" (S1). Further, the segments are converted into data such as those shown in FIG. 49. The same files are collected and arranged in sequence of start time. Subsequently, the interface means 2401 subjects the data sets shown in FIG. 49 to the following processing in sequence from top to bottom. First, the interface means 2401 refers to an element <mediaobject> of structure description data through use of an "id" and reads a file name on the basis of attribute "locator" of the element <mediaobject>. 5 Data pertaining to a file corresponding to the file name are read from the database, and the thus-read data are output to the demultiplex means 2402 (S2 and S3). The start time and the end time of the selected segment of the file, which are described so as to follow the "id," are output to the video skimming means 2403 10 and the audio skimming means 2404 (S4). After all the data sets have been subjected to the foregoing processing, processing is terminated (S5). If some of the data sets still remain 15 unprocessed, the previously-described processing is repeated after completion of the processing effected by the demultiplex means 2402, the processing effected by the video skimming means 2403, and the processing effected by the audio skimming means 2404 20 (S6 and S7).

Processing pertaining to the demultiplex means 2402 will now be described. FIG. 50 is a flowchart showing processing 25 effected by the demultiplex means 2402. The demultiplex means

2402 receives a system stream of MPEG-1 format, which corresponds to media content, from the interface means 2401 and separates the thus-received system stream of MPEG-1 format into a video stream and an audio stream. The video stream is output to the video 5 skimming means 2403, and the audio stream is output to the audio skimming means 2404 (S1 to S10). After completion of output of the video and audio streams (S9 and S11), termination of the processing performed by the demultiplex means 2402 is reported to the interface means 2401 (S12). As indicated by the flowchart 10 shown in FIG. 50, with the exception of transmission of processing termination acknowledgement, the processing performed by the demultiplex means 2402 is identical with that performed by the demultiplex means according to the first embodiment.

Processing effected by the video skimming means 2403 will 15 now be described. FIG. 53 is a flowchart showing the processing effected by the video skimming means 2403. As indicated by the flowchart shown in FIG. 53, with the exception of sending of processing termination acknowledgement to the interface means 2401 performed at the end of the processing (S15 and S17), the 20 processing performed by the video skimming means 2403 is identical with that effected by the video skimming means according to the first embodiment.

Processing performed by the audio skimming means 2404 will now be described. FIG. 52 is a flowchart showing the 25 processing effected by the audio skimming means 2402. As

indicated by the flowchart shown in FIG. 52, with the exception of sending of a processing termination acknowledgement to the interface means 2401 at the end of processing (S11 and S12), the processing performed by the audio skimming means is identical with 5 that performed by the audio skimming means described in connection with the first embodiment.

In the formation step 1803, the video and audio streams output in the extraction step 1802 are subjected to time-division multiplexing by means of a multiplex method for MPEG-1 10 standardized under International Standard ISO/IEC IS 11172-1.

In a case where media content is stored into a plurality of separate files, each of the files is multiplexed in the extraction step 1802 in order to output a video stream and an audio stream.

In the delivery step 1804, the system stream of MPEG-15 1 format multiplexed in the formation step 1803 is delivered over the line. When a plurality of system streams of MPEG-1 format are output in the formation step 1803, all the system streams are delivered in the sequence in which they are output.

In the present embodiment, in a case where media content 20 is stored into a plurality of separate files, each of the files is processed in the extraction step 1802. In the formation step 1803, wherein all the relevant video and audio streams of the files of media content are connected together and the thus-connected streams are output, the same advantageous result as that yielded 25 in the formation step 1803 is achieved even when the video and

audio streams are multiplexed into a single system stream of MPEG-1 format. In this case, the time code must be changed by the video skimming means 2403 such that the counter C for counting the number of output frames is incremented by only the amount corresponding 5 to the number of video streams. The counter C is initialized at only the beginning of a file (S3 and S18 shown in FIG. 51). The processing effected by the video skimming means 2403 at this time is provided in the flowchart shown in FIG. 53. Although in the fifth embodiment the context description data and the physical 10 context data are described separately from one another, these data sets may be merged into a single data set by means of appending attributes "seq" and "locator" of the structure description data to the attribute of the element <mediaobject> of the context description data.

15 [Sixth Embodiment]

A sixth embodiment of the present invention will now be described by reference to the accompanying drawings. In the present embodiment, a motion picture of MPEG-1 format is taken as media content. In this case, a media segment corresponds to 20 a single scene cut. Further, a score corresponds to the objective degree of contextual importance of a scene of interest.

FIG. 54 is a block diagram showing a media processing method according to the sixth embodiment of the present invention. In FIG. 54, reference numeral 3101 designates a selection step; 25 3102 designates an extraction step; 3103 designates a formation

step; 3104 designates a delivery step; and 3105 designates a database. In the selection step 3101, a scene of media content is selected from context description data, and there are output data pertaining to the start time and the end time of the 5 thus-selected scene, as well as data representing a file where the data are stored. Thus, processing pertaining to the selection step 3101 is identical with that effected in the selection step in the fifth embodiment. In the extraction step 3102, there are received the data sets representing the start time and the end 10 time of the scene and the data representing the file, which are output in the selection step 3101. Further, data pertaining to the segment defined by the start and end time output in the selection step 3101 are extracted from the file of media content, by reference to structure description data. Processing 15 pertaining to the extraction step 3102 is identical with that effected in the extraction step in the fifth embodiment. In the formation step 3103, a portion or the entirety of the stream output in the extraction step 3102 is multiplexed according to the traffic volume determined in the delivery step 3104, thereby constituting 20 a system stream of MPEG-1 format. In the delivery step 3104, the traffic volume of the line over which the system stream of MPEG-1 format is delivered is determined, and the determination result is transmitted for use in the formation step 3103. Further, in the delivery step 3104, the system stream of MPEG-1 format prepared 25 in the formation step 3103 is delivered over the line. Reference

numeral 3105 designates a database where media content, structure description data thereof, and context description data are stored.

FIG. 55 is a block diagram showing processing performed 5 during the formation step 3103 and the delivery step 3104 according to the sixth embodiment. In FIG. 55, the formation step 3103 is embodied by stream selection means 3201 and multiplex means 3202.

The delivery step 3104 is embodied by traffic volume determination means 3203 and delivery means 3204. The stream 10 selection means 3201 receives the video and audio streams output in the extraction step 3102 and the traffic volume output from the traffic volume determination means 3203. If the traffic volume of the line is sufficiently low to allow transmission of all data sets, all the system streams are output to the multiplex 15 means 3202. If a long time is required for transmitting all the data sets due to the line being busy or high traffic volume, only portions of the plurality of audio and video streams are selected and output to the multiplex means 3202. In this case, selection 20 may be implemented in several ways; namely, selection of only the basic layer of the video stream, selection of only monophonic sound of the audio stream, selection of only the left stereo signal of the same, selection of only the right stereo signal of the same, or like selection of a combination thereof. Here, if only a single video stream and a single audio stream exist, the streams are 25 output regardless of the traffic volume. The multiplex means 3202

subjects the video and audio streams output from the stream selection means 3201 to time-division multiplexing, by means of the multiplex method for the MPEG-1 format standardized under International Standard ISO/IEC IS 11172-1. The traffic volume 5 determination means 3203 examines the current state and traffic volume of the line over which streams are transmitted and outputs the results of examination to the stream selection means 3201. The delivery means 3204 delivers over the line the system stream of MPEG-1 format multiplexed by the multiplex means 3202.

10 In the present embodiment, in a case where a single video stream exists, the stream selection means 3201 outputs the video stream regardless of traffic volume. However, if transmission, over the line, of all the data sets pertaining to the video stream requires a large amount of time, only a representative image of 15 the video stream may be selected and transmitted. At the time of selection of a representative image, a time code of the representative image is described in the context description data. 20 Alternatively, only a single frame, which is called I picture and can be decoded independently, may be selected from among a plurality of frames.

[Seventh Embodiment]

A seventh embodiment of the present invention will now be described by reference to the accompanying drawings. In the present embodiment, a motion picture of a system stream of MPEG-1 25 format is taken as media content. In this case, a media segment

corresponds to a single scene cut. Further, in the present embodiment, a score corresponds to the objective degree of contextual importance of a scene of interest from the viewpoint of a keyword related to a character or event selected by the user.

5 FIG. 56 is a block diagram showing a processing method according to the seventh embodiment of the present invention. In FIG. 56, reference numeral 3301 designates a selection step; and 3302 designates an extraction step. In the selection step 3301, a scene of media content is selected from context description data 10 by means of a keyword and a score thereof appended to the context description data. Data pertaining to the start time and the end time of the thus-selected scene are output. In the extraction step 3302, data pertaining to the segment defined by the start time and end time output in the selection step 3301 are extracted.

15 FIG. 57 shows the configuration of the context description data according to the seventh embodiment. In the present embodiment, the context is described according to a tree structure. Elements within the tree structure are arranged in chronological sequence from left to right. In FIG. 57, the root 20 of the tree designated <contents> represents a single portion of content, and the title of the content is assigned to the root as an attribute.

Children of <contents> are designated by <section>. A keyword representing the contents or characters of a scene and 25 priority representing the degree of importance of the keyword are

appended to the element <section> as an attribute in the form of a pair of keyword and priority. The priority assumes an integral value ranging from 1 to 5, where 1 designates the least degree of importance and 5 designates the greatest degree of importance.

5 The pair(a keyword and priority) is set so that it can be used as a key for retrieving a particular scene, or characters, as desired by the user. For this reason, a plurality of pairs (each pair including a keyword and priority) may be appended to a single element <section>. For example, in a case where characters are 10 described, pairs are appended to a single element <section>, in a number equal to the number of characters appearing in a scene of interest. The value of the priority appended to the scene is set so as to become greater when a large number of characters appear in a scene of interest.

15 Children of <section> are designated by <section> or <segment>. Here, an element <section> per se can be taken as a child of another child <section>. However, a single element <section> cannot have a mixture of children <section> and children <segment>.

20 An element <segment> represents a single scene cut. A pair (a keyword and priority) similar to that appended to the element <section> and time information about a scene of interest; namely, "start" representing the start time and "end" representing the end time, are appended to <segment> as attributes.

25 Scenes may be cut through use of commercially-available software

or software available over a network. Alternatively, scenes may be cut manually. Attribute "from" representing the start time of a scene can specify the start frame of a scene of interest.

Although in the present embodiment time information is expressed 5 in terms of the start time and the end time of a scene cut, a similar result is realized when time information is expressed in terms of the start time of the scene of interest and a duration of the scene of interest. In this case, the end time of the scene of interest is obtained by addition of the duration to the start time.

10 In the case of a story such as a movie, chapters, sections, and paragraphs can be described on the basis of the context description data, through use of elements <section>. In another example, when a baseball game is described, elements <section> of the highest hierarchical level may be used for describing 15 innings, and their children <section> may be used for describing half innings. Further, second-generation children <section> of the elements <section> are used for describing at-bats of respective batters. Third-generation children <section> of the elements <section> are also used for describing each pitch, a time 20 period between pitches, and batting results.

The context description data having such a configuration may be expressed in a computer through use of, e.g., Extensible Markup Language (XML). XML is a data description language whose standardization is pursued by the World Wide Web Consortium.

25 Recommendations Ver. 1.0 was submitted on February 10, 1998.

Specifications of XML Ver. 1.0 can be acquired from <http://www.w3.org/TR/1998/REC-xml-19980210>. FIGS. 58 to 66 show one example of Document Type Definition (DTD) used for describing the context description data of the present embodiment 5 through use of XML, and one example of context description data described through use of DTD. FIGS. 67 through 80 show one example of context description data prepared by addition of representative data (dominant-data) of a media segment, such as a representative image (i.e., video data) and a keyword (audio 10 data), to the context description data shown in FIGS. 58 through 66, and a DTD used for describing the context description data through use of XML.

Processing relating to the selection step S3301 will now be described. In the present embodiment, processing pertaining 15 to the selection step S3301 is effected by focusing on an element <segment> and an element <section> having children <segment>.

FIG. 81 is a flowchart showing processing pertaining to the selection step 3301 according to the seventh embodiment. In the selection step 3301, the keyword, which serves as a key for 20 selecting a scene, and the threshold value of priority thereof are entered, thereby selecting an element <section> which has a keyword identical with the entered key and whose priority exceeds the threshold value from among elements <section> having elements <segment> of context description data as children (S2 and S3). 25 Subsequently, only a child <segment> which has a keyword

identical with the key and whose priority exceeds the threshold value is selected from among the children <segment> of the thus-selected element <section> (S5 and S6). The start time and end time of the selected scene are determined from attributes 5 "start" and "end" of the child <segment> selected through the foregoing processing, and the start time and end time are output (S7, S8, S9, S10, S11, S1, and S4).

Although in the present embodiment selection is effected by focusing on an element <segment> and an element <section> having 10 children <segment>, selection may be effected by focusing on another parent-and-child relationship; e.g., an element <section> and its child <section> within a certain hierarchical stratum. Further, the parent-and-child relationship is not limited solely to a two-layer hierarchical stratum. The number 15 of hierarchical levels of the hierarchical stratum may be increased to more than two, and leaves of the tree structure; i.e., descendant <segment>, may be subjected to the same processing. Furthermore, the retrieval key may be set as a pair including a plurality of keywords and conditions defining the relationship 20 between the keywords. Conditions defining the relationship between the keywords comprise combinations, such as "either," "both," or "either or both." The threshold value for selection may be specified, and in the case of a plurality of keywords processing may be performed for each keyword. The keyword serving 25 as a retrieval key may be entered by the user or automatically

set by the system on the basis of a user profile.

Processing relating to the extraction step 3302 is identical with that effected in the extraction step described in connection with the first embodiment.

5 As shown in FIG. 82, the present embodiment yields an advantage of the ability to play back only scenes of media content of interest as desired by an audience, by means of inputting the video stream output from the extraction step 3302 into video playback means and the audio stream output from the same into audio playback means, and playing back the audio and video streams, which are mutually synchronized. Further, there can be prepared a system stream of MPEG-1 format relating to a collection of scenes of media content of interest as desired by the audience, by means of multiplexing the video stream and the audio stream.

10

15 [Eighth Embodiment]

An eighth embodiment of the present invention will now be described. The eighth embodiment differs from the seventh embodiment only in terms of the processing relating to the selection step.

20 Processing relating to the selection step S3301 will now be described. In the present embodiment, processing pertaining to the election step S3301 is effected by focusing on only the element <segment>. FIG. 83 is a flowchart showing processing pertaining to the selection step 3301 according to the seventh embodiment. As shown in FIG. 83, in the selection step 3301, the

25

keyword, which serves as a key for selecting a scene, and the threshold value of priority thereof are entered. A child <segment>, which has a keyword identical with the key and whose priority exceeds the threshold value, is selected from among the 5 elements <segment> of context description data (S1 to S6).

Although in the eighth embodiment selection is effected by focusing on only the element <segment>, selection may also be effected by focusing on only an element <section> of a certain hierarchical level. Furthermore, the retrieval key may be set 10 as a pair including a plurality of keywords and conditions defining the relationship between the keywords. Conditions defining the relationship between the keywords comprise combinations, such as "either," "both," or "either or both." The threshold value for selection may be specified, and in the case of a plurality of 15 keywords processing may be performed for each keyword.

[Ninth Embodiment]

A ninth embodiment of the present invention will now be described. The ninth embodiment differs from the seventh embodiment only in terms of the processing relating to the 20 selection step.

Processing relating to the selection step S3301 will now be described by reference to the accompanying drawings. As in the case of the processing described in connection with the seventh embodiment, in the selection step 3301 according to the ninth 25 embodiment, selection is effected by focusing on only an element

<segment> and an element <section> having children <segment>. In the present embodiment, a threshold value is set with regard to the sum of duration periods of all scenes to be selected; more specifically, selection is effected such that the sum of the 5 duration periods of the scenes that have been selected so far is maximized but remains smaller than the threshold value. FIG. 84 is a flowchart showing processing relating to the selection step according to the ninth embodiment. In the selection step 3301, a single keyword, which serves as a retrieval key, is received.

10 Subsequently, of the elements <section> having children <segment>, all the elements <section> having keywords identical with the retrieval key are extracted. A collection of the thus-selected elements <section> is taken as set Ω (S1 and S2). The elements <section> of the set Ω are sorted in descending 15 order of priority (S3). Subsequently, the element <section> whose keyword or retrieval key has the highest priority value is selected from the thus-sorted elements of the set Ω (S5). The thus-selected element <section> is deleted from the set Ω (S6). In this case, if a plurality of elements <section> have the 20 highest priority value, all the elements <section> are extracted. Of the children <segment> of the thus-selected elements <section>, only the children <segment> having the retrieval keys are selected, and the thus-selected children <segment> are added to another set Ω' (S7). The initial value of the set Ω' is "empty" (S2). The

sum of duration periods of scenes pertaining to the set Ω' is obtained (S8), and the sum is compared with a threshold value (S9).

If the sum of duration periods is equal to the threshold value, data pertaining to all the segments of the elements <segment> included in the set Ω' are output, and processing is terminated (S14). In contrast, if the sum of duration periods is lower than the threshold value, processing again returns to the selection from the set Ω (S5) of an element <section> whose retrieval key or keyword has the highest priority. The previously-described selection processing is repeated. If the set Ω is empty, data pertaining to all the segments of the elements <segment> of the set Ω' are output, and processing is terminated (S4). If the sum of duration periods of the scenes relating to the set Ω' exceeds the threshold value, the following processing is performed. The element <segment> whose retrieval key or keyword has the minimum priority is deleted from the set Ω' (S11). At this time, if a plurality of elements <segment> have the minimum priority, all the elements <segment> are deleted. The sum of duration periods of the elements <segment> of set Ω' is obtained (S12), and the sum is compared with a threshold value (S13). If the sum of duration periods exceeds the threshold value, processing again returns to deletion of the elements <segment> from the set Ω' (S11). Such deletion processing is performed repeatedly. Here, if the set Ω' is empty, processing is terminated (S10). In

contrast, if the sum of duration periods is lower than the threshold value, data pertaining to all the segments of the elements <segment> of the set Ω' are output, and processing is terminated (S14).

5 Although in the present embodiment selection is effected by focusing on an element <segment> and an element <section> having children <segment>, selection may be effected by focusing on another parent-and-child relationship; e.g., an element <section> and its children <segment> within another hierarchical 10 level. Further, the parent-and-child relationship is not limited solely to a two-layer hierarchical stratum; the number of hierarchical levels of the hierarchical stratum may be increased. For instance, in a case where elements are in the hierarchical layers ranging from an element <section> of the 15 highest hierarchical level to its child <segment> are subjected to processing, the element <section> of the highest hierarchical level is selected. Further, a successor <section> of the thus-selected element <section> is selected, and a second-generation child of the thus-selected element <section> is 20 further selected. Such a round of selection operations is repeated until the child <segment> is selected. The thus-selected elements <segment> are collected into a set Ω' .

In the present embodiment, elements are sorted in descending order of priority of the retrieval key or keyword. A 25 threshold value may be set with regard to the priority value, and

elements may be selected in descending order of priority. The threshold value may be separately set with regard to the element **<section>**, as well as with regard to the element **<segment>**.

In the present embodiment, the retrieval key is specified
5 as a single keyword. However, the retrieval key may be set as a pair including a plurality of keywords and conditions defining the relationship between the keywords. Conditions defining the relationship between the keywords comprise combinations, such as "either," "both," or "either or both." In this case, there is
10 required a rule for determining the priority of keywords used in selection or deletion of elements **<section>** and elements **<segment>**. One example of such a rule is as follows: If the condition is "either," the highest priority value of the priority values of corresponding keywords is set as "priority." Further,
15 if the condition is "both," the minimum priority value of the priority value of corresponding keywords is set as "priority." Even when the condition is "either or both," the priority value can be determined in accordance with this rule. Further, in a case where a plurality of retrieval keys or keywords exist, a
20 threshold value may be set with regard to the priority of the keywords as the retrieval keys, and elements whose priority value exceeds the threshold value may be processed.

[Tenth Embodiment]

A tenth embodiment of the present invention will now be
25 described. The tenth embodiment differs from the seventh

embodiment only in terms of the processing relating to the selection step.

Processing relating to the selection step S3301 will now be described by reference to the accompanying drawings. As in 5 the case of the processing described in connection with the eighth embodiment, in the selection step 3301 according to the tenth embodiment, selection is effected by focusing on only an element <segment>. Further, as in the case of the ninth embodiment, in the present embodiment a threshold value is set with regard to 10 the sum of duration periods of all scenes to be selected. Specifically, an element is selected such that the sum of duration periods of scenes which have been selected so far is maximized but remains lower than the threshold value. FIG. 85 is a flowchart showing processing relating to the selection step according to 15 the tenth embodiment.

In the selection step 3301, a single keyword, which serves as a retrieval key, is received. The set Ω' is initialized to "empty" (S2). Subsequently, of the elements <segment>, all the elements <segment> having keywords identical with the retrieval 20 key are extracted (S1). A collection of the thus-selected elements <segment> is taken as set Ω . Subsequently, the elements <segment> whose keyword as the retrieval key has the highest priority value are sorted in descending order of priority (S3). From the thus-sorted elements of the set Ω , the element <segment> 25 whose retrieval key as the keyword has the highest priority value

is extracted (S5), and the thus-extracted element <segment> is deleted from the set Ω . In this case, if a plurality of elements <segment> have the highest priority value, all the elements <segment> are selected. If the set Ω is empty, data pertaining 5 to all the segments of the elements <segment> of the set Ω' are output, and processing is terminated (S4). A sum, T_1 , of duration periods of the thus-extracted elements <segment> is computed (S6), and a sum, T_2 , of duration periods of scenes of the set Ω' is computed (S7). The sum of T_1 and T_2 is compared with the threshold 10 value (S8). If the sum of T_1 and T_2 exceeds the threshold value, data pertaining to all the segments of the elements <segment> included in the set Ω' are output, and processing is terminated (S11). If the sum of T_1 and T_2 equals the threshold value, all 15 the extracted elements <segment> are added to the elements of the set Ω' (S9 and S10), data pertaining to all the segments of the elements <segment> included in the set Ω' are output, and processing is terminated (S11). In contrast, if the sum of T_1 and T_2 is lower than the threshold value, all the extracted 20 elements <segment> are added to the elements of the set Ω' , and processing then returns to selection of elements <segment> from the set Ω (S10).

Although in the present embodiment selection is effected by focusing on the elements <segment>, selection may be effected by focusing on elements <section> in another hierarchical level.

In the present embodiment, elements are sorted in descending order of priority of the keyword as the retrieval key. A threshold value may be set with regard to the priority value, and elements may be selected in descending order of priority, given that the 5 priority values of the elements are greater than the threshold value.

Further, in the present embodiment, the retrieval key is specified as a single keyword. However, the retrieval key may be set as a pair including a plurality of keywords and conditions 10 defining the relationship between the keywords. Conditions defining the relationship between the keywords comprise combinations, such as "either," "both," or "either or both." In this case, there is required a rule for determining the priority of keywords used in selection or deletion of elements <section> 15 and <segment>. One example of such a rule is as follows: If the condition is "either," the highest priority value of the priority values of corresponding keywords is set as "priority." Further, if the condition is "both," the minimum priority value of the priority value of corresponding keywords is set as "priority." 20 Even when the condition is "either or both," the priority value can be determined in accordance with this rule. Further, in a case where a plurality of retrieval keys or keywords exist, a threshold value may be set with regard to the priority of the retrieval keys or keywords, and elements whose priority value 25 exceed the threshold value may be processed.

[Eleventh Embodiment]

An eleventh embodiment of the present invention will now be described. The context description data of the present embodiment differs from those of the seventh through tenth 5 embodiments, in terms of a viewpoint—which serves as a keyword to be used for selecting a scene—and the description of degree of importance of the viewpoint. As shown in FIG. 57, in the seventh through tenth embodiments, the viewpoint and the degree of importance based thereon are described by assigning a 10 combination of a keyword and the degree of importance; i.e., (keyword, priority), to an element <section> or <segment>. In contrast, as shown in FIG. 133, according to the eleventh embodiment, the viewpoint and the degree of importance thereof are described by assigning an attribute "povlist" to the root 15 <contents> and assigning an attribute "povvalue" to an element <section> or <segment>.

As shown in FIG. 134, the attribute "povlist" corresponds to a viewpoint expressed in the form of a vector. As shown in FIG. 135, the attribute "povvalue" corresponds to the degree of 20 importance expressed in the form of a vector. Combination sets, each set comprising a viewpoint and the degree of importance thereof in a one-to-one relationship, are arranged in sequence given, thus forming the attributes "povlist" and "povvalue." For instance, in illustrations shown in FIGS. 134 and 135, the degree 25 of importance pertaining to viewpoint 1 assumes a value of 5, the

degree of importance pertaining to viewpoint 2 assuming a value of 0; the degree of importance pertaining to viewpoint 3 assuming a value of 2; and the degree of importance pertaining to viewpoint "n" (where "n" designates a positive integer) assuming a value of 0. In the case of the seventh embodiment, the degree of importance pertaining to viewpoint 2 assuming a value of 0 means that viewpoint 2 is not assigned a keyword; i.e., a combination (keyword, priority).

FIGS. 136 to 163 and FIGS. 164 to 196 show examples of Document Type Definition (DTD) used for describing the context description data of the present embodiment, through use of Extensible Markup Language (XML) to be used in expressing the context description data in a computer, and an example of context description data described in DTD. Even in the present embodiment, those processing operations which are the same as those described in connection with the seventh through tenth embodiments are effected through use of the context description data.

In the present embodiment, the attribute "povlist" is assigned to the root <contents>, and the attribute "povvalue" is appended to an element <section> or <segment>. As shown in FIG. 197, the attribute "povlist" may also be appended to an element <section> or <segment>. In the case of an element <section> or <segment> assigned the attribute "povlist," the attribute "povvalue" corresponds to the attribute "povlist" assigned to the element <section> or <segment>. In the case of the element

<section> or <segment> which is not assigned the attribute "povlist," the attribute "povvalue" corresponds to the attribute "povlist" assigned to the root <contents> or the attribute "povlist" of the closest element <section> assigned the attribute "povlist" from among the ancestors of an element <section> or <segment> which is not assigned the attribute "povlist."

FIGS. 198 to 252 show an example of DTD which corresponds to that shown in FIG. 197 and is used for describing the context description data of the present embodiment through use of XML to be used in expressing the context description data in a computer, and an example of context description data described in DTD. In these illustrated examples, the attribute "povvalue" assigned to an element <section> or <segment> corresponds to the attribute "povlist" assigned to the root <contents>.

15 [twelfth Embodiment]

A twelfth embodiment of the present invention will now be described by reference to the accompanying drawings. In the present embodiment, a motion picture of a system stream of MPEG-1 format is taken as media content. In this case, a media segment corresponds to a single scene cut.

FIG. 86 is a block diagram showing a media processing method according to the twelfth embodiment of the present invention. In FIG. 86, reference numeral 4101 designates a selection step; 4102 designates an extraction step; 4103 designates a formation step; 4104 designates a delivery step; and

4105 designates a database. In the selection step 4101, a scene of media content is selected from context description data, and there are output data pertaining to the start time and the end time of the thus-selected scene, as well as data representing a 5 file where the data are stored. In the extraction step 4102, there are received the data sets representing the start time and the end time of the scene and the data sets representing the file output in the selection step 4101. By reference to the structure description data, data pertaining to the segment defined by the 10 start and end time received in the selection step 4101 are extracted from the file of media content. In the formation step 4103, the data output in the extraction step 4102 are multiplexed, thus configuring a system stream of MPEG-1 format. In the delivery step 4104, the system stream of MPEG-1 format prepared 15 in the formation step 4103 is delivered over a line. Reference numeral 4105 designates a database where media content, structure description data thereof, and context description data are stored.

The configuration of structure description data employed 20 in the twelfth embodiment is identical with that described in connection with the fifth embodiment. More specifically, the structure description data having a configuration shown in FIG. 37 are used.

FIG. 87 shows the configuration of the context 25 description data according to the twelfth embodiment. The

context description data of the present embodiment corresponds to the context description data of the seventh embodiment appended a link to the element <mediaobject> of the structure description data. More specifically, the root <contents> of the context description data has a child <mediaobject>, and the element <mediaobject> has a child <section>. Elements <section> and <segment> are identical with those used in the seventh embodiment.

5 The element <mediaobject> of the context description data is appended an attribute "id." The element <mediaobject> of the structure description data is associated with the element <mediaobject> of the context description data, by means of the attribute "id." Scenes of the media content described by means of descendants of the element <mediaobject> of the context description data are stored in a file designated by the element <mediaobject> of the structure description data having an attribute id of the same value. Further, time information "start" 10 and "end" assigned to an element "segment" set the time which has elapsed from the head of each file. Specifically, in a case where a single piece of media content comprises a plurality of files, <mediaobject> of the structure description data having an attribute id of the same value. Further, time information "start" and "end" assigned to an element "segment" set the time which has elapsed from the head of each file corresponds to 0, and the start time of each scene is represented by the time which has elapsed 15 from the head of the file to a scene of interest.

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The structure description data and the context description data may be expressed in a computer through use of, e.g., Extensible Markup Language (XML). FIG. 39 used in

connection with the fifth embodiment shows one example of the structure description data. Further, FIGS. 88 to 96 show one example of Document Type Definition (DTD) used for describing the context description data shown in FIG. 87 through use of XML, and 5 one example of context description data described through use of the DTD.

Processing relating to the selection step 4101 will now be described. In the selection step 4101, any one of the methods described in connection with the seventh through tenth 10 embodiments is adopted as a method of selecting a scene. The "id" of the element <mediaobject> of corresponding structure description data is eventually output simultaneously with output of the start time and the end time of a selected scene. In a case where the structure description data are described in the form 15 of an XML document through use of the DTD shown in FIG. 39 and where the context description data are described in the form of an XML document through use of the DTD shown in FIGS. 88 and 96, one example of data output from the selection step 4101 is the same as that shown in FIG. 46 in connection with the fifth 20 embodiment.

Processing relating to the extraction step 4102 is identical with the extraction step described in connection with the fifth embodiment. The processing relating to the formation step 4103 is also identical with the formation step described in 25 connection with the fifth embodiment. Further, processing

pertaining to the delivery step 4104 is also identical with the delivery step described in connection with the fifth embodiment.

[Thirteenth Embodiment]

A thirteenth embodiment of the present invention will now 5 be described by reference to the accompanying drawings. In the present embodiment, a motion picture of a system stream of MPEG-1 format is taken as media content. In this case, a media segment corresponds to a single scene cut.

FIG. 97 is a block diagram showing a media processing 10 method according to the thirteenth embodiment of the present invention. In FIG. 97, reference numeral 4401 designates a selection step; 4402 designates an extraction step; 4403 designates a formation step; 4404 designates a delivery step; and 15 4405 designates a database. In the selection step 4401, a scene of media content is selected from context description data, and there are output data pertaining to the start time and the end time of the thus-selected scene, as well as data representing a file where the data are stored. Processing relating to the selection step 4401 is identical with that relating to the 20 selection step described in connection with the twelfth embodiment. In the extraction step 4402, there are received the data sets representing the start time and the end time of the scene and the data sets representing the file output in the selection step 4401. By reference to the structure description data, data 25 pertaining to the segment defined by the start and end time

received in the selection step are extracted from the file of media content. Processing relating to the extraction step 4402 is identical with that relating to the extraction step described in connection with the twelfth embodiment. In the formation step 5 4403, a portion or the entirety of the system stream output in the extraction step 4402 is multiplexed in accordance with the traffic volume of the line determined in the delivery step 4404, thus configuring the system stream of MPEG-1 format. Processing relating to the formation step 4403 is identical with that relating 10 to the extraction step described in connection with the sixth embodiment. In the delivery step 4404, the traffic volume of the line is determined, and the determination result is transmitted to the formation step 4403. Further, the system stream of MPEG-1 format prepared in the formation step 4403 is delivered over the 15 line. Processing relating to the formation step 4404 is identical with that relating to the formation step described in connection with the sixth embodiment. Reference numeral 4405 designates a database where media content, structure description data thereof, and context description data are stored.

20 Although in the thirteenth embodiment the system stream of MPEG-1 is taken as media content, the same advantageous result as that yielded by the MPEG-1 system stream can be yielded even by use of another format, so long as the format permits obtaining of a time code for each screen.

25 Embodiments, which will be provided below, describe

abstracts of modes corresponding to the inventions claimed in appended claims. An expression "sound data" will be hereinafter used as data pertaining to sound comprising audible tones, silence, speech, music, tranquility, external noise or like sound. An expression "video data" will be hereinafter used as data which are audible and visible, such as a motion picture, a static image, or characters such as telops. An expression "score" will be hereinafter used as a score to be calculated from the contents of sound data, such as audible tones, silence, speech, music, tranquillity, or external noise; a score to be assigned in accordance with presence or absence of telops in the video data; or a combination thereof. Further, a score other than those mentioned above may also be used.

[Fourteenth Embodiment]

A fourteenth embodiment of the present invention will now be described and relates to an invention described in claim 28. FIG. 98 is a block diagram showing processing pertaining to a data processing method of the present embodiment. In the drawing, reference numeral 501 designates a selection step; and 503 designates an extraction step. In the selection step 501, at least one segment or scene of media content is selected on the basis of a score of context description data, and the thus-selected segment or scene is output. The selected segment corresponds to, for example, the start time and end time of a selected segment. In the extraction step 503, only the data pertaining to a segment

of media content (hereinafter referred to as a "media segment") partitioned by the segment selected in the selection step S501; namely, the data pertaining to the selected segment, are extracted.

5 Particularly, in the invention described in claim 30, a score corresponds to the objective degree of contextual importance of a scene of interest from the viewpoint of a keyword related to a character or event selected by the user.

[Fifteenth Embodiment]

10 A fifteenth embodiment of the present invention will now be described and relates to an invention described in claim 29.

FIG. 99 is a block diagram showing processing pertaining to a data processing method of the present embodiment. In the drawing, reference numeral 501 designates a selection step; and 505 15 designates a playback step. In the playback step 505, only the data pertaining to the segment partitioned by a selected segment output in the selection step 501 are played back. Processing pertaining to the selection step 501 is the same as that described in connection with the first through thirteenth embodiments, and 20 hence repetition of its explanation is omitted here for brevity.

[Sixteenth Embodiment]

A sixteenth embodiment of the present invention will now be described and relates to an invention described in claim 38.

FIG. 100 is a block diagram showing processing pertaining to a 25 data processing method of the sixteenth embodiment. In the

drawing, reference numeral 507 designates a video the selection step; and 509 designates an audio selection step. Both the video the selection step 507 and the audio selection step 509 are included in the selection step 501 described in connection with 5 the fourteenth and fifteenth embodiment.

In the video the selection step 507, a segment or scene of video data is selected by reference to context description data pertaining to video data, and the thus-selected segment is output.

In the audio the selection step 509, a segment of sound is selected 10 by reference to context description data pertaining to sound data, and the thus-selected segment is output. Here, the selected segment corresponds to, for example, the start time and end time of the selected segment. In the extraction step 503 described in connection with the fourteenth embodiment, only data from the 15 segment of video data selected in the video the selection step 507 are played back. In the playback step 505, only data from the segment of sound data selected in the audio selection step 509 are played back.

[Seventeenth Embodiment]

20 A seventeenth embodiment of the present invention will now be described and relates inventions described in claims 41, 42, 43, 44, 45, and 46. FIG. 101 is a block diagram showing processing relating to a data processing method of the present embodiment. In the drawing, reference numeral 511 designates a 25 determination step; 513 designates a selection step; 503

designates an extraction step; and 505 designates a playback step.

(Example 1)

In an invention described in claim 41, media content comprises a plurality of different media data sets within a single period of time. In the determination step 511, there are received structure description data which describes the configuration of data of the media content. In this step, data which are objects of selection are determined on the basis of determination conditions, such as the capability of a receiving terminal, the traffic volume of a delivery line, and a user request. In the selection step 513, there are received the data which are determined to be an object of selection in the determination step 511, the structure description data, and the context description data. Further, a media data set is selected from only the data which are determined to be the object of selection in the determination step 511. Since the extraction step 503 is identical with the extraction step described in connection with the fourteenth embodiment and the playback step 505 is identical with the playback step described in connection with the fifteenth embodiment, repetition of their descriptions is omitted here.

Media data comprise several data sets, such as video data, sound data, and text data. In the following description of examples, media data comprise in particular at least one of video data and sound data.

In the present example, as shown in FIG. 102, within a

single period of time of media content, different video data or sound data are assigned to channels, and the video data or sound data are further assigned to a hierarchical set of layers. For instance, a channel-1/layer-1 for transmitting a motion picture 5 is assigned to video data having a standard resolution, and a channel-1/layer-2 is assigned to video data having a high resolution. A channel 1 for transmitting sound data is assigned to stereophonic sound data, and a channel 2 is assigned to monophonic sound data. FIGS. 103 and 104 show one example of 10 Document Type Definition (DTD) used for describing structure description data through use of XML, and one example of context description data described through use of DTD.

In a case where media content is formed of such channels and layers, processing pertaining to the determination step 511 15 of the present example will now be described by reference to FIGS. 105 to 108. As shown in FIG. 105, in step 101 a determination is made as to whether or not a user request exists. If in step 101 a user request is determined to exist, the user request is subjected to determination processing SR-A shown in FIG. 106.

20 In step 101, if no user request is determined to exist, processing proceeds to step S103, where another determination is made as to whether or not receivable data are video data only, sound data only, or both video and sound data. If in step S103 receivable data are determined to be solely video data, 25 determination processing SR-C pertaining to video data shown in

FIG. 107 is executed. If receivable data are determined to solely sound data, determination processing SR-C pertaining to sound data shown in FIG. 108 is executed. If both video and audio data are receivable, processing proceeds to step S105. In step S105, 5 a determination is made as to the capability of a receiving terminal for receiving video and audio data; for example, video display capability, playback capability, and a rate at which compressed data are decompressed. If the capability of the receiving terminal is determined to be high, processing proceeds 10 to step S107. In contrast, if the capability of the receiving terminal is determined to be low, processing proceeds to step S109.

In step S107, the traffic volume of a line over which video data and sound data are to be transported is determined. If the traffic volume of the line is determined to be high, processing proceeds 15 to step S109. If the traffic volume of the line is determined to be low, processing proceeds to step S111.

Processing pertaining to step S109 is executed when the receiving terminal has low capability or the traffic volume of the line is high. During the processing, the receiving terminal 20 receives video data having a standard resolution over the channel-1/layer-1 and sound data over the channel 2. Processing pertaining to step S111 is executed when the receiving terminal has high capability or the traffic volume is low. During the processing, the receiving terminal receives video data having a 25 high resolution over the channel-1/layer-2 and stereophonic sound

over the channel 1.

The determination processing SR-A pertaining to user request shown in FIG. 106 will now be described. In the present example, the user request is assumed to select a video layer and a sound channel. In step S151, a determination is made as to whether or not the user requests video data. If in step S151 the user is determined to request video data, processing proceeds to step S153. If the user is determined not to request video data, processing proceeds to step S159. In step S153, a determination is made as to whether or not the user request for video data corresponds to selection of a layer 2. If YES is chosen in step S153, processing proceeds to step S155, where the layer 2 is selected as video data. If NO is chosen in step S153, processing proceeds to step S157, where a layer 1 is selected as video data.

In step S159, a determination is made as to whether or not the user requests audio data. If in step S159 the user is determined to request audio data, processing proceeds to step S161. If the user is determined not to request audio data, processing is terminated. In step S161, a determination is made as to whether or not the user request for audio data corresponds to selection of a channel 1. If YES is chosen in step S161, processing proceeds to step S162, where the channel 1 is selected as audio data. If NO is chosen in step S161, processing proceeds to step S165, where the channel 2 is selected as audio data.

The determination processing SR-B pertaining to video

data shown in FIG. 107 will now be described. In step S171, a determination is made as to the capability of a receiving terminal for receiving video data. If the receiving terminal is determined to have high capability, processing proceeds to step S173. If 5 the receiving terminal is determined to have low capability, processing proceeds to step S175. In step S173, the traffic volume of a line is determined. If the traffic volume of the line is determined to be high, processing proceeds to step S175. In contrast, if the traffic volume of the line is determined to be 10 low, processing proceeds to step S177.

Processing pertaining to step S175 is executed when the receiving terminal has low capability or the traffic volume of the line is high. During the processing, the receiving terminal receives only video data having a standard resolution over the 15 channel-1/layer-1. Processing pertaining to step S177 is executed when the receiving terminal has low capability or the traffic volume of the line is low. During the processing, the receiving terminal receives only video data having a high resolution over the channel-1/layer-2.

20 The determination processing SR-C pertaining to sound data shown in FIG. 108 will now be described. In step S181, a determination is made as to the capability of a receiving terminal for receiving audio data. If the receiving terminal is determined to have high capability, processing proceeds to step S183. If 25 the receiving terminal is determined to have low capability,

processing proceeds to step S185. In step S183, the traffic volume of a line is determined. If the traffic volume of the line is determined to be high, processing proceeds to step S185. In contrast, if the traffic volume of the line is determined to be 5 low, processing proceeds to step S187.

Processing pertaining to step S185 is executed when the receiving terminal has low capability or the traffic volume of the line is high. During the processing, the receiving terminal receives only monophonic audio data over the channel 2.

10 Processing pertaining to step S187 is executed when the receiving terminal has low capability or the traffic volume of the line is low. During the processing, the receiving terminal receives only stereophonic sound data over the channel 1.

(Example 2)

15 An invention described in claim 42 differs from the invention described in example 1 (the invention described in claim 41) in only processing pertaining to the determination step S511.

In the determination step S511, there are received structure description data which describe the configuration of data of the 20 media content. In this step, on the basis of determination conditions, such as the capability of a receiving terminal, the traffic volume of a delivery line, and a user request, a determination is made as to whether only video data, only sound data, or both video and sound data are to be selected. Since the 25 selection step 513, the extraction step 503, and the playback step

505 are identical with those described previously, repetition of their explanations is omitted here.

Processing pertaining to the determination step 511 of the present example will now be described by reference to FIGS. 5 109 and 110. As shown in FIG. 109, in step S201 a determination is made as to whether or not a user request exists. If in step S201 a user request is determined to exist, processing proceeds to step S203. If no user request is determined to exist, processing proceeds to step S205. In step S203, a determination 10 is made as to whether or not the user requests solely video data.

If YES is chosen in step S203, processing proceeds to step S253, where only video data are determined to be an object of selection.

If NO is chosen in step S203, processing proceeds to step S207.

In step S207, a determination is made as to whether or not the 15 user requests only sound data. If YES is chosen in step S207, processing proceeds to step S255, where only sound data are determined to be an object of selection. If NO is chosen in step S207, processing proceeds to step S251, where both video and audio data are determined to be objects of selection.

20 In step S205, to which processing proceeds when no user request exists, a determination is made as to whether only video data, only sound data, or both video and sound data are receivable.

If in step S205 only video data are determined to be receivable, processing proceeds to step S253, where only video data are 25 determined to be an object of selection. If in step S205 only

sound data are determined to be receivable, processing proceeds to step S255, where only sound data are determined to be an object of selection. If in step S205 both video and sound data are determined to be receivable, processing proceeds to step S209.

5 In step S209, the traffic volume of the line is determined.

If the traffic volume of the line is low, processing proceeds to step S251, where both video and sound data are determined to be objects of selection. If the traffic volume of the line is high, processing proceeds to step S211. In step S211, a determination is made as to whether or not data to be transported over the line include sound data. If YES is chosen in step S211, processing proceeds to step S255, where sound data are determined to be an object of selection. If NO is chosen in step S211, processing proceeds to step S253, where video data are determined to be an object of selection.

10 (Example 3)

In an invention according to claim 43, media content comprises a plurality of different video and/or sound data sets at a single period of time. In addition to a determination as to whether only video data, only sound data, or both video and sound data are to be selected, which is made in the determination step 511 of the second example (according to the invention defined in claim 42), in the determination step S511 of the third example a determination is made as to which one of video data sets/audio data sets is to be selected as an object of selection, on the basis

of determination conditions, such as the capability of a receiving terminal, the traffic volume of a delivery line, and a user request. Since the selection step 513, the extraction step 503, and the playback step 505 are identical with those described previously, 5 repetition of their explanations is omitted here.

As in the case of example 1, within a single period of time of media content, different video data or sound data are assigned to channels or layers. For instance, a channel-1/layer-1 for transmitting a motion picture is assigned to video 10 data having a standard resolution, and a channel-1/layer-2 is assigned to video data having a high resolution. A channel 1 for transmitting sound data is assigned to stereophonic sound data, and a channel 2 is assigned to monophonic sound data. FIGS. 103 and 104 show one example of Document Type Definition (DTD) used 15 for describing structure description data through use of XML, and one example of context description data described through use of DTD.

Processing pertaining to the determination step 511 of the third example will now be described by reference to FIGS. 111 20 to 113. As shown in FIG. 111, in the present example, as in the case of the determination made in the example 2, data which are an object of selection are determined (object-of-selection determination SR-D). In step S301, the data determined through the object-of-selection determination processing SR-D are 25 determined. In step S301, when only video data are determined

to be an object of selection, processing pertaining to determination processing SR-E relating to video data shown in FIG. 112 is executed. In step S301, when only audio data are determined to be an object of selection, processing pertaining to 5 determination processing SR-F relating to audio data shown in FIG. 113 is executed. In step S301, when both video and audio data are determined to be an object of selection, processing proceeds to step S303, where the capability of a receiving terminal for receiving video and audio data is determined. If the receiving 10 terminal is determined to have high capability, processing proceeds to step S305. If the receiving terminal is determined to have low capability, processing proceeds to step S307, where the capability of a line, such as a transmission rate, is determined. If the line is determined to have high capability, 15 processing proceeds to step S309. In contrast, if the line is determined to have low capability, processing proceeds to step S307. If the line is determined to have a high traffic volume, processing proceeds to step S307. If the line is determined to have a low traffic volume, processing proceeds to step S311. 20 Processing relating to step S307 is executed when the receiving terminal has low capability, the line has low capability, or the line has a high traffic volume. During the processing, the receiving terminal receives video data having a standard resolution over the channel-1/layer-1 and monophonic sound data 25 over the channel 2. In contrast, processing relating to step S311

is executed when the receiving terminal high capability, the line has high capability, or the line has a low traffic volume. During the processing, the receiving terminal receives video data having a high resolution over the channel-1/layer-2 and stereophonic sound data over the channel 1.

The determination processing SR-E pertaining to video data shown in FIG. 112 will now be described. In step S351, a determination is made as to the capability of a receiving terminal for receiving video data. If the receiving terminal is determined to have high capability, processing proceeds to step S353. If the receiving terminal is determined to have low capability, processing proceeds to step S355. In step S353, the capability of the line is determined. If the capability of the line is determined to be high, processing proceeds to step S357. In contrast, if the capability of the line is determined to be low, processing proceeds to step S355. In step S357, the traffic volume of the line is determined. If the traffic volume of the line is determined to be high, processing proceeds to step S355. In contrast, if the traffic volume of the line is determined to be low, processing proceeds to step S359.

Processing relating to step S355 is executed when the receiving terminal has low capability, the line has low capability, or the line has a high traffic volume. During the processing, the receiving terminal receives only video data having a standard resolution over the channel-1/layer-1. In contrast, processing

relating to step S359 is executed when the receiving terminal high capability, the line has high capability, or the line has a low traffic volume. During the processing, the receiving terminal receives only video data having a high resolution over the 5 channel-1/layer-2.

The determination processing SR-F pertaining to audio data shown in FIG. 113 will now be described. In step S371, a determination is made as to the capability of a receiving terminal for receiving audio data. If the receiving terminal is determined 10 to have high capability, processing proceeds to step S373. If the receiving terminal is determined to have low capability, processing proceeds to step S375. In step S373, the capability of the line is determined. If the capability of the line is determined to be high, processing proceeds to step S377. In 15 contrast, if the capability of the line is determined to be low, processing proceeds to step S375. In step S377, the traffic volume of the line is determined. If the traffic volume of the line is determined to be high, processing proceeds to step S375. In contrast, if the traffic volume of the line is determined to 20 be low, processing proceeds to step S379.

Processing relating to step S375 is executed when the receiving terminal has low capability, the line has low capability, or the line has a high traffic volume. During the processing, the receiving terminal receives only monophonic audio data over 25 the channel 2. In contrast, processing relating to step S379 is

executed when the receiving terminal high capability, the line has high capability, or the line has a low traffic volume. During the processing, the receiving terminal receives only stereophonic audio data over the channel 1.

5 (Example 4)

In inventions described in claims 44 and 45, representative data pertaining to a corresponding media segment are added, as an attribute, to individual elements of context description data in the lowest hierarchical layer. Media content 10 comprises a plurality of different media data sets at a single period of time. In the determination step S511, there are received structure description data which describe the configuration of data of the media content. In this step, a determination as to which one of the media data sets and/or 15 representative data sets is taken as an object of selection is made on the basis of determination conditions, such as the capability of a receiving terminal, the traffic volume of a delivery line, the capability of the line, and a user request.

Since the selection step 513, the extraction step 503, 20 and the playback step 505 are identical with those described previously, repetition of their explanations is omitted here.

Media data comprise video data, sound data, or text data. In the present example, media data include at least one of video data and sound data. In a case where representative data correspond 25 to video data, the representative data include, for example,

representative image data for each media segment or low-resolution video data. In a case where representative data correspond to audio data, the representative data include, for example, key-phrase data for each media segment.

5 As in the case of example 3, within a single period of time of media content, different video data or sound data are assigned to channels or layers. For instance, a channel-1/layer-1 for transmitting a motion picture is assigned to video data having a standard resolution, and a channel-1/layer-2 is
10 assigned to video data having a high resolution. A channel 1 for transmitting sound data is assigned to stereophonic sound data, and a channel 2 is assigned to monophonic sound data.

Processing pertaining to the determination step 511 of the present example will now be described by reference to FIGS. 15 114 to 118. As shown in FIG. 114, in step S401 a determination is made as to whether or not a user request exists. If in step S401 a user request is determined to exist, determination processing SR-G relating to user request shown in FIG. 116 is executed.

20 If in step S401 no user request is determined to exist, processing proceeds to step S403, where a determination is made as to whether only video data, only sound data, or both video and sound data are receivable. If in step S403 only video data are determined to be receivable, determination processing SR-H 25 relating to video data shown in FIG. 117 is executed. In contrast,

if only sound data are determined to be receivable, determination processing SR-I relating to audio data shown in FIG. 118 is executed. If both video and sound data are determined to be receivable, processing proceeds to step S405 shown in FIG. 115.

5 In step S405, the capability of the receiving terminal is determined. After execution of processing pertaining to step S405, there are performed, in the sequence given, processing pertaining to step S407 for determining the capability of the line and processing pertaining to step S409 for determining the traffic 10 volume of the line. On the basis of the results of the processing operations performed in steps S405, S407, and S409, in the determination step S511 of the present example a determination is made as to channels or layers of video data or audio data to be received, or as to representative data to be received.

15

TABLE 1

CAPABILITY OF RECEIVING TERMINAL	CAPABILITY OF LINE	DOES A LINE HAVE A HIGH TRAFFIC VOLUME?	RECEIVED DATA
HIGH	HIGH	NO	VIDEO DATA: CHANNEL 1, LAYER 2 AUDIO DATA: CHANNEL 1 (S411)
HIGH	HIGH	YES	VIDEO DATA: CHANNEL 1, LAYER 1 AUDIO DATA: CHANNEL 1

			(S413)
HIGH	LOW	NO	VIDEO DATA: CHANNEL 1, LAYER 1 AUDIO DATA: CHANNEL 2 (S413)
HIGH	LOW	YES	VIDEO DATA: CHANNEL 1, LAYER 1 AUDIO DATA: CHANNEL 2 (S415)
LOW	HIGH	NO	VIDEO DATA: CHANNEL 1, LAYER 1 AUDIO DATA: CHANNEL 2 (S415)
LOW	HIGH	YES	VIDEO DATA: REPRESENTATIVE DATA AUDIO DATA: CHANNEL 2 (S417)
LOW	LOW	NO	VIDEO DATA: REPRESENTATIVE DATA AUDIO DATA: CHANNEL 2 (S417)
LOW	LOW	YES	VIDEO DATA: REPRESENTATIVE DATA AUDIO DATA: REPRESENTATIVE DATA (S419)

Determination processing SR-G relating to a user request shown in FIG. 116 will now be described. In step S451, a determination is made as to whether or not the user requests only video data. If YES is chosen in step S451, processing 5 determination SR-H pertaining to video data is performed. If NO is chosen in step S451, processing proceeds to step S453. In step S453, a determination is made as to whether or not the user requests only audio data. If YES is chosen in step S453, determination processing SR-I relating to audio data is performed. If NO is 10 chosen in step S453, processing proceeds to step S405.

Determination processing SR-H relating to video data shown in FIG. 117 will now be described. In step S461, a determination is made as to the capability of the receiving terminal. After execution of processing pertaining to step S461, 15 there are performed, in the sequence given, processing pertaining to step S463 for determining the capability of the line and processing pertaining to step S465 for determining the traffic volume of the line. After the processing operations pertaining to these steps S461, S463, and S465 have been completed, only video 20 data are received over the channel-1/layer-2 during the determination processing SR-H pertaining to video data of the present example, provided that the receiving terminal has high capability, the line has high capability, and the traffic volume of the line is low (step S471). In contrast, if the receiving 25 terminal has low capability, the line has low capability, and the

traffic volume of the line is high, only representative video data are received (step S473). If none of the foregoing conditions are satisfied, only video data are received over the channel-1/layer-1 (step S475).

5 Determination processing SR-I relating to audio data shown in FIG. 118 will now be described. In step S471, a determination is made as to the capability of the receiving terminal. After execution of processing pertaining to step S471, there are performed, in the sequence given, processing pertaining
10 to step S473 for determining the capability of the line and processing pertaining to step S475 for determining the traffic volume of the line. After the processing operations pertaining to these steps S471, S473, and S475 have been completed, only audio data are received over the channel 1 during the determination
15 processing SR-I pertaining to audio data of the present example, provided that the receiving terminal has high capability, the line has high capability, and the traffic volume of the line is low (step S491). In contrast, if the receiving terminal has low capability, the line has low capability, and the traffic volume
20 of the line is high, only representative audio data are received (step S493). If none of the foregoing conditions are satisfied, only video data are received over the channel 2 (step S495).

(Fifth Example)

In an invention described in claim 46, on the basis of
25 determination conditions, such as the capability of a receiving

terminal, the capability of a delivery line, the traffic volume of the line, and a user request, a determination is made as to which one of the entire data pertaining to a media segment, only representative data pertaining to a corresponding media segment, 5 or either the entire data pertaining to a corresponding media segment or representative data is to be taken as an object of selection.

As in the case of example 4, representative data pertaining to a corresponding media segment are added, as an 10 attribute, to individual elements of context description data in the lowest hierarchical layer. In a case where representative data correspond to video data, the representative data include, for example, representative image data for each media segment or low-resolution video data. In a case where representative data 15 correspond to audio data, the representative data include, for example, key-phrase data for each media segment.

Processing pertaining to the determination step 511 of the present example will now be described by reference to FIGS. 119 to 121. As shown in FIG. 119, in step S501 a determination 20 is made as to whether or not a user request exists. If in step S501 a user request is determined to exist, determination processing SR-J relating to user request shown in FIG. 121 is executed.

In step S501 no user request is determined to exist, 25 processing proceeds to step S503, where a determination is made

as to whether only representative data pertaining to a media segment, only the entire data pertaining to the media segment, or both the representative data and the entire data pertaining to the media segment are receivable. If in step S503 only 5 representative data are determined to be receivable, processing proceeds to step S553 shown in FIG. 120, wherein only representative data are determined to be taken as an object of selection. If only entire data are determined to be receivable, processing proceeds to step S555, wherein only the entire data 10 are determined to be taken as an object of selection. If both the representative data and the entire data are determined to be receivable, processing proceeds to step S505.

In step S505, the capability of the line is determined. If the line is determined to have high capability, processing 15 proceeds to step S507. In contrast, if the line is determined to have low capability, processing proceeds to step S509. In each of steps S507 and S509, the traffic volume of the line is determined.

In step S507, if the line is determined to have low traffic volume, processing proceeds to step S551, where both the entire data and 20 the representative data are determined to be taken as objects of selection. In step S509, the line is determined to have high traffic volume, processing proceeds to step S553, where representative data are taken as an object of selection. If in step S507 the line is determined to have high traffic volume and 25 in step S509 the line is determined to have high traffic volume,

processing proceeds to step S555, where the entire data are taken as an object of selection.

During determination processing SR-J relating to a user request, in step S601 a determination is made as to whether a user request corresponds to only representative data. If YES is chosen in step S601, processing proceeds to step S553, where only representative data are taken as an object of selection. If NO is selected in step S601, processing proceeds to step S603, where a determination is made as to whether or not the user request corresponds to only the entire data. If YES is chosen in step S603, processing proceeds to step S555, where only the entire data are taken as an object of selection. If NO is chosen in step S603, processing proceeds to step S551, where both the entire data and the representative data pertaining to the media segment are taken as objects of selection.

[Eighteenth Embodiment]

An eighteenth embodiment of the present invention will now be described. The present embodiment is directed to an invention described in claim 48. FIG. 122 is a block diagram showing processing pertaining to a data processing method of the present embodiment. Particularly, the processing is related to the invention described in claim 28. In the drawing, reference numeral 501 designates a selection step; 503 designates an extraction step; and 515 designates a formation step. Since the selection step 501 and the extraction step 503 are identical with

those described in connection with the fourteenth embodiment, repetition of their explanations is omitted here.

In the formation step 515, a stream of media content is formed from the data pertaining to a selected segment extracted 5 in the extraction step 503. Particularly, in the formation step 515 a stream is formed by multiplexing the data output in the extraction step 503.

[Nineteenth Embodiment]

A nineteenth embodiment of the present invention will now 10 be described. The present embodiment relates to an invention described in claim 49. FIG. 123 is a block diagram showing processing pertaining to a data processing method of the present embodiment. In the drawing, reference numeral 501 designates a selection step; 503 designates an extraction step; 515 designates 15 a formation step; and 517 designates a delivery step. Since the selection step 501 and the extraction step 503 are identical with those described in connection with the fourteenth embodiment, repetition of their explanations is omitted here. Further, the formation step 515 is identical with the formation step described 20 in connection with the eighteenth embodiment, and hence repetition of its explanation is omitted.

In the delivery step 517, the stream formed in the formation step 515 is delivered over a line. The delivery step 517 may include a step of determining the traffic volume of the 25 line, and the formation step 515 may include a step of adjusting

the amount of data constituting the file, on the basis of the traffic volume of the line determined in the delivery step 517.

[Twentieth Embodiment]

A twentieth embodiment of the present invention will now 5 be described. The present embodiment relates to an invention described in claim 50. FIG. 124 is a block diagram showing processing pertaining to a data processing method of the present embodiment. In the drawing, reference numeral 501 designates a selection step; 503 designates an extraction step; 515 designates 10 a formation step; 519 designates a recording step; and 521 designates a data recording medium. In recording step 519, the stream formed in the formation step 515 is recorded on the data recording medium 521. The data recording medium 521 is used for recording a media content, context description data pertaining 15 to the media content, and structure description data pertaining to the media content. The data recording medium 521 such as a hard disk, memory, or DVD-RAM and so on. Since the selection step 501 and the extraction step 503 are identical with those described in connection with the fourteenth embodiment, repetition of their 20 explanations is omitted here. Further, the formation step 515 is identical with the formation step described in connection with the eighteenth embodiment, and hence repetition of its explanation is omitted.

[Twenty-first Embodiment]

25 A twenty-first embodiment of the present invention will

now be described. The present embodiment relates to an invention described in claim 51. FIG. 125 is a block diagram showing processing pertaining to a data processing method of the present embodiment. In the drawing, reference numeral 501 designates a 5 selection step; 503 designates an extraction step; 515 designates a formation step; 519 designates a recording step; 521 designates a data recording medium; and 523 designates a data recording medium management step. In data recording medium management step 523, the media content which has already been stored and/or media 10 content which is to be newly stored are reorganized according to the available disk space of the data recording medium 521. More specifically, in the data recording medium management step 523, at least one of the following processing operations is performed. When the available disk space of the data recording medium 521 15 is small, a media content to be newly stored is stored after having been subjected to edition. Context description data and structure description data, both pertaining to the media content which has already been stored, are sent to the selection step 501. The media content and the structure description data are sent 20 to the extraction step 503. The media content is reorganized, and the thus-reorganized content is recorded on the data recording medium 521. Further, the media content which has not been reorganized is deleted.

Since the selection step 501 and the extraction step 503 25 are identical with those described in connection with the

fourteenth embodiment, repetition of their explanations is omitted here. Further, the formation step 515 is identical with the formation step described in connection with the eighteenth embodiment, and hence repetition of its explanation is omitted.

5 Moreover, since recording step 519 and data recording medium 521 are identical with those described in connection with the nineteenth embodiment, repetition of their explanations is omitted here.

[Twenty-second Embodiment]

10 A twenty-first embodiment of the present invention will now be described. The present embodiment relates to an invention described in claim 52. FIG. 126 is a block diagram showing processing pertaining to a data processing method of the present embodiment. In the drawing, reference numeral 501 designates a
15 selection step; 503 designates an extraction step; 515 designates a formation step; 519 designates a recording step; 521 designates a data recording medium; and 525 designates a stored content management step. In the stored content management step 525, the media content which have already been stored in the data recording
20 medium 521 are reorganized according to the period of storage of the media content. More specifically, the stored content management step 525 comprises steps of: managing the media content stored in the data recording medium 521; sending context description data and physical content data, which pertain to a
25 media content which have been stored over a predetermined period

of time, to the selection step 501; sending the media content and the structure description data to the extraction step 503; re-organizing the media content; recording the thus-reorganized media content onto the data recording medium 521; and deleting 5 the media content which has not been re-organized yet.

Since the selection step 501 and the extraction step 503 are identical with those described in connection with the fourteenth embodiment, repetition of their explanations is omitted here. Further, the formation step 515 is identical with 10 the formation step described in connection with the eighteenth embodiment, and hence repetition of its explanation is omitted. Moreover, since recording step 519 and data recording medium 521 are identical with those described in connection with the nineteenth embodiment, repetition of their explanations is 15 omitted here.

In the previously-described thirteenth through twenty-second embodiments, the selection steps 501 and 513 can be embodied as selection means; the video the selection step 507 can be embodied as video selection means; the audio the selection 20 step 509 can be embodied as audio selection means; the determination step 511 can be embodied as determination means; the formation step 515 can be embodied as formation means; the delivery step 517 can be embodied as delivery means; the recording step 519 can be embodied as recording means; the data recording 25 medium management step 523 can be embodied as data recording medium

management means; and the stored content management step 525 can be embodied as stored content management means. There can be embodied a data processing device comprising a portion of these means or all of the means.

5 In the previous embodiments, the media content may include a data stream, such as text data, other than video and audio data. Further, individual steps of the previous embodiments may be embodied by storage, into a program storage medium, of a program for causing the computer to perform processing 10 pertaining to all or a portion of the steps in the form of software or through use of a hardware circuit specifically designed so as to exhibit the features of the steps.

Although in the previous embodiments context description data and structure description data have been described 15 separately, they may be combined into a single data set, as shown in FIGS. 127 to 132.

As has been described previously, according to the data processing device, the data processing method, the recording medium, and the program of the present invention, at least one 20 segment is selected from a media content on the basis of a score appended to context description data by means of selection means (corresponding to the selection step), through use of context description data of hierarchical stratum. Particularly, only the data pertaining to a segment selected by the selection means 25 (corresponding to the selection step) are extracted by means of

the extraction means (corresponding to the extraction step).

Alternatively, only the data pertaining to the segment selected by the selection means (corresponding to the selection step) are played back, by means of the playback means (corresponding to the 5 playback step).

By means of the foregoing configuration, a more important scene can be freely selected from the media content, and the thus-selected important segment can be extracted or played back.

Further, the context description data assume a hierarchical 10 stratum comprising the highest hierarchical layer, the lowest hierarchical layer, and other hierarchical layers. Scenes can be selected in arbitrary units, such as on a per-chapter basis or a per-section basis. There may be employed various selection formats, such as selection of a certain chapter and deletion of 15 unnecessary paragraphs from the chapter.

In the data processing device, the data processing method, the recording medium, and the program of the present invention, a score represents the degree of contextual importance of media content. So long as the score is set so as to select important 20 scenes, a collection of important scenes of a program, for example, can be readily prepared. Further, so long as the score is set so as to represent the importance of a scene of interest from the viewpoint of keyword, segments can be selected with a high degree of freedom by determination of a keyword. For example, so long 25 as a keyword is determined from a specific viewpoint, such as a

character or an event, only the scenes desired by the user can be selected.

In the data processing device, the data processing method, the recording medium, and the program of the present invention, 5 in a case where media content comprises a plurality of different media data sets within a single period of time, the determination means (corresponding to the determination step) determines which of the media data sets is to be taken as an object of selection, on the basis of determination conditions. The selection means 10 (corresponding to the selection step) selects a media data set from only the data determined by the determination means (corresponding to the determination step). Since the determination means (corresponding to the determination step) can determine media data pertaining to an optimum segment according 15 to determination conditions, the selection means (corresponding to the selection step) can select an appropriate amount of media data.

In the data processing device, the data processing method, the recording medium, and the program of the present invention, 20 the determination means (corresponding to the determination step) determines whether only the video data, only the audio data, or both video and audio data are to be taken as an object of selection, on the basis of the determination conditions. As a result, the time required by the selection means (corresponding to the 25 selection step) for selecting a segment can be shortened.

In the data processing device, the data processing method, the recording medium, and the program of the present invention, representative data are appended to the context description data as an attribute, and the determination means can determine media data of an optimum segment or representative data, according to 5 determination conditions.

In the data processing device, the data processing method, the recording medium, and the program of the present invention, the determination means (corresponding to the determination step) 10 determines whether only the entire data pertaining to a corresponding media segment, only the representative data, or both the entire data and representative data are to be taken as objects of selection, on the basis of the determination conditions. As a result, the determination means can shorten the time required 15 by the selection means (corresponding to the selection step) for selecting a segment.

WHAT IS CLAIMED IS:

1. A data processing device comprising:

input means for inputting context description data described in a hierarchical structure,

5 wherein the hierarchical structure comprises:

the highest hierarchical layer in which time-varying media content and the context of the media content are formed into a single element representing media content;

10 the lowest hierarchical layer in which an element represents a media segment formed by dividing the media content and is assigned, as an attribute, time information relating to a corresponding media segment and a score; and

15 other hierarchical layers include elements which are directly or indirectly associated with at least one of the media segments and which represent scenes or a set of scenes; and selection means for selecting at least one segment from the media content, on the basis of the score assigned to the context description data.

20 2. The data processing device according to claim 1, further comprising extraction means for extracting only data corresponding to the segment selected by the selection means, from the media content.

25 3. The data processing device according to claim 1,

further comprising playback means for playing back only data corresponding to the segment selected by the selection means, from the media content.

5 4. The data processing device according to claim 1, wherein the score represents a contextual importance of media content.

5 5. The data processing device according to claim 1, 10 wherein the score represents the degree of contextual importance of a scene of interest from the viewpoint of a keyword, and the selection means selects a scene in which the score is used from at least one viewpoint.

15 6. The data processing device according to claim 1, wherein the media content corresponds to video data or audio data.

7. The data processing device according to claim 1, 20 wherein the media content corresponds to data comprising video data and audio data, which are mutually synchronized.

8. The data processing device according to claim 7, wherein the context description data describe the configuration of video data or audio data.

9. The data processing device according to claim 7,
wherein the context description data describe the configuration
of each of video data sets and audio data sets.

5 10. The data processing device according to claim 8,
wherein the selection means selects a scene by reference to context
description data pertaining to video data or audio data.

10 11. The data processing device according to claim 8,
wherein the selection means comprises video selection means for
selecting a scene of video data by reference to context description
data of video data or audio selection means for selecting a scene
of audio data by reference to context description data of audio
data.

15 12. The data processing device according to claim 9,
wherein the selection means comprises video selection means for
selecting a scene of video data by reference to context description
data of video data, and audio selection means for selecting a scene
20 of audio data by reference to context description data of audio
data.

25 13. The data processing device according to claim 2,
wherein the data to be extracted by the extraction data correspond
to video data or audio data.

14. The data processing device according to claim 2,
wherein the data to be extracted by the extraction data correspond
to data comprising video data and audio data, which are mutually
5 synchronized.

15. The data processing device according to claim 1,
wherein media content comprises a plurality of different media
data sets within a single period of time; and
10 the data processing device further comprises:

determination means which receives structure description
data having a data configuration of the media content described
therein and determines which one of the media data sets is to be
taken as an object of selection, on the basis of determination
15 conditions to be used for determining data as an object of
selection; and

20 the selection means selects data from only the data sets,
which have been determined as objects of selection by the
determination means, by reference to the structure description
data.

16. The data processing device according to claim 1,
further comprising:
25 determination means which receives structure description
data having a data configuration of the media content described

therein and determines whether only video data, only audio data, or both video data and audio data are taken as an object of selection, on the basis of determination conditions to be used for determining data as an object of selection; and wherein

5 the selection means selects data from only the data sets determined as objects of selection by the determination means, by reference to the structure description data.

17. The data processing device according to claim 16,
10 wherein media content comprises a plurality of different media data sets within a single period of time;

the determination means receives structure description data having a data configuration of the media content described therein and determines which one of the video data sets and/or
15 audio data sets is to be taken as an object of selection; and

the selection means selects data from only the data sets determined as objects of selection by the determination means, by reference to the structure description data.

20 18. The data processing device according to claim 1,
wherein representative data pertaining to a corresponding media segment are added, as an attribute, to individual elements of context description data in the lowest hierarchical layer; and
the selection means selects the entire data pertaining
25 to the media segment and/or representative data pertaining to a

corresponding media segment.

19. The data processing device according to claim 18,
wherein the entire data pertaining to the media segment correspond
5 to media data, and the media content comprises a plurality of
different media data sets within a single period of time; and
the data processing device further comprises
determination means which receives structure description data
having a data configuration of the media content described therein
10 and determines which one of the media data sets and/or
representative data sets is to be taken as an object of selection;
and
the selection means selects data from only the data sets
determined as objects of selection by the determination means,
15 by reference to the structure description data.

20. The data processing device according to claim 18,
further comprising:
determination means which receives structure description
20 data having a data configuration of the media content described
therein and determines whether only the entire data pertaining
to the media segment, only the representative data pertaining to
the media segment, or both the entire data and the representative
data pertaining to a corresponding media segment are taken as
25 objects of selection, on the basis of determination conditions

to be used for determining data as an object of selection; and
wherein

the selection means selects data from only the data sets
determined as objects of selection by the determination means,
5 by reference to the structure description data.

21. The data processing device according to claim 15,
wherein the determination conditions comprise at least one of the
capability of a receiving terminal, the traffic volume of a
10 delivery line, a user request, and a user's taste, or a combination
thereof.

22. The data processing device according to claim 2,
further comprising formation means for forming a stream of media
15 content from the data extracted by the extraction means.

23. The data processing device according to claim 22,
further comprising delivery means for delivering the stream
formed by the formation means over a line.

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24. The data processing device according to claim 22,
further comprising recording means for recording the stream
formed by the formation means on a data recording medium.

25. The data processing device according to claim 24,

further comprising data recording medium management means which re-organizes the media content that has already been stored and/or media content to be newly stored, according to the available disk space of the data recording medium.

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26. The data processing device according to claim 24, further comprising stored content management means for re-organizing the media content stored in the data recording medium according to the period of storage of the media content.

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27. A data processing method comprising the steps of: inputting context description data described in a hierarchical structure,

wherein the hierarchical structure comprises:

15

the highest hierarchical layer in which time-varying media content and the context of the media content are formed into a single element representing media content;

20

the lowest hierarchical layer in which an element represents a media segment formed by dividing the media content and is assigned, as an attribute, time information relating to a corresponding media segment and a score; and

other hierarchical layers include elements which are directly or indirectly associated with at least one of the media segments and which represent scenes or a set of scenes; and

25

selecting at least one segment from the media content,

on the basis of the score assigned to the context description data.

28. The data processing method according to claim 27,
further comprising an extraction step for extracting only data
5 corresponding to the segment selected by the selection means, from
the media content.

29. The data processing method according to claim 27,
further comprising a playback step for playing back only data
10 corresponding to the segment selected by the selection means, from
the media content.

30. The data processing method according to claim 27,
wherein the score represents a contextual importance of media
15 content.

31. The data processing method according to claim 27,
wherein the score represents the degree of contextual importance
of a scene of interest from the viewpoint of a keyword, and in
20 the selection step there is selected a scene in which the score
is used from at least one viewpoint.

32. The data processing method according to claim 27,
wherein the media content corresponds to video data or audio data.

33. The data processing method according to claim 27, wherein the media content corresponds to data comprising video data and audio data, which are mutually synchronized.

5 34. The data processing method according to claim 32, wherein the context description data describe the configuration of video data or audio data.

10 35. The data processing method according to claim 33, wherein the context description data describe the configuration of each of video data sets and audio data sets.

15 36. The data processing method according to claim 34, wherein, in the selection step, a scene is selected by reference to context description data pertaining to video data or audio data.

20 37. The data processing method according to claim 34, wherein the selection step comprises a video selection step for selecting a scene of video data by reference to context description data of video data or an audio selection step for selecting a scene of audio data by reference to context description data of audio data.

25 38. The data processing method according to claim 35, wherein the selection means comprises a video selection step for

selecting a scene of video data by reference to context description data of video data, and an audio selection step for selecting a scene of audio data by reference to context description data of audio data.

5

39. The data processing method according to claim 28, wherein the data to be extracted in the extraction step correspond to video data or audio data.

10

40. The data processing method according to claim 28, wherein the data to be extracted in the extraction step correspond to data comprising video data and audio data, which are mutually synchronized.

15

41. The data processing method according to any one of claims 27, wherein media content comprises a plurality of different media data sets within a single period of time; and the data processing method further comprises a determination step of receiving structure description data having a data configuration of the media content described therein and determining which one of the media data sets is to be taken as an object of selection, on the basis of determination conditions to be used for determining data as an object of selection; and, in the selection step, data are selected from only the data sets, which have been determined 20 as objects of selection by the determination means, by reference 25

to the structure description data.

42. The data processing method according to claim 27,
further comprising:

5 a determination for receiving structure description data
having a data configuration of the media content described therein
and determines whether only video data, only audio data, or both
video data and audio data are taken as an object of selection,
on the basis of determination conditions to be used for determining
10 data as an object of selection; and wherein

in the selection step, data are selected from only the
data sets determined as objects of selection by the determination
means, by reference to the structure description data.

15 43. The data processing device according to claim 42,
wherein media content comprises a plurality of different media
data sets within a single period of time;

20 in the determination step, there are received structure
description data having a data configuration of the media content
described therein, and a determination is made as to which one
of the video data sets and/or audio data sets is to be taken as
an object of selection; and

25 in the selection means, data are selected from only the
data sets determined as objects of selection by the determination
means, by reference to the structure description data.

44. The data processing method according to any one of claims 27, wherein representative data pertaining to a corresponding media segment are added, as an attribute, to 5 individual elements of context description data in the lowest hierarchical layer; and

in the selection step, there are selected the entire data pertaining to the media segment and/or representative data pertaining to a corresponding media segment.

10

45. The data processing method according to claim 44, wherein the entire data pertaining to the media segment correspond to media data, and the media content comprises a plurality of different media data sets within a single period of time; and

15

the data processing method further comprises a determination step for receiving structure description data having a data configuration of the media content described therein and determining which one of the media data sets and/or representative data sets is to be taken as an object of selection;

20 and

in the selection means, data are selected from only the data sets determined as objects of selection by the determination means, by reference to the structure description data.

25

46. The data processing method according to claim 44,

further comprising:

a determination step for receiving structure description data having a data configuration of the media content described therein and determining whether only the entire data pertaining

5 to the media segment, only the representative data pertaining to the media segment, or both the entire data and the representative data pertaining to a corresponding media segment are taken as objects of selection, on the basis of determination conditions to be used for determining data as an object of selection; and

10 wherein in the selection step, data are selected from only the data sets determined as objects of selection by the determination means, by reference to the structure description data.

15 47. The data processing method according to claim 41, wherein the determination conditions comprise at least one of the capability of a receiving terminal, the traffic volume of a delivery line, a user request, and a user's taste, or a combination thereof.

20 48. The data processing method according to claim 28, further comprising a formation step for forming a stream of media content from the data extracted by the extraction means.

25 49. The data processing method according to claim 48,

further comprising a delivery step for delivering the stream formed by the formation means over a line.

50. The data processing method according to claim 48,
5 further comprising a recording step for recording the stream formed by the formation means on a data recording medium.

51. The data processing method according to claim 50,
further comprising a data recording medium management step for
10 re-organizing the media content that has already been stored
and/or media content to be newly stored, according to the available
disk space of the data recording medium.

52. The data processing method according to claim 50,
15 further comprising a stored content management step for re-
organizing the media content stored in the data recording medium
according to the period of storage of the media content.

53. A computer-readable recording medium on which the
20 data processing method according to claim 27 is recorded in the
form of a program to be performed by a computer.

54. A program for causing a computer to perform the data
processing method according to claim 27 .

ABSTRACT OF DISCLOSURE

A context of media content is represented by context description data having a hierarchical stratum. The context description data has the highest hierarchical layer, the lowest 5 hierarchical layer, and other hierarchical layers. The highest hierarchical layer is formed from a single element representing content. The lowest hierarchical layer is formed from an element representing a segment of media content which corresponds to a change between scenes of video data or a change in audible tones.

10 The remaining hierarchical layers are formed from an element representing a scene or a collection of scenes. A score corresponding to the context of a scene of interest is appended, as an attribute, to the element in each of the remaining hierarchical layers. A score relating to the time information

15 about a corresponding media segment and a context is appended, as an attribute, to individual elements in the lowest hierarchical layer. In a selection step of a data processing method, the context of the media content is expressed, and one or a plurality of scenes of the media content is or are selected on the basis

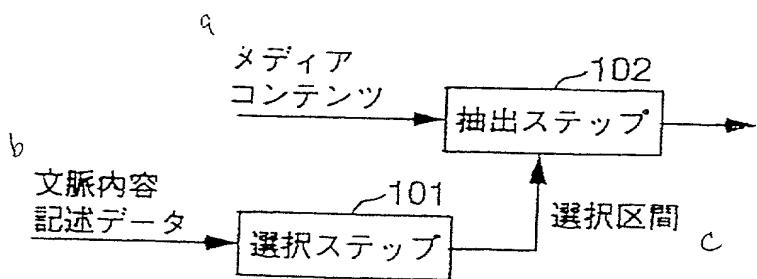
20 of the score of the context description data. Further, in the extraction step of the data processing method, only data pertaining to the scenes selected in the selection step are extracted.

【書類名】

図面

図 1

Fig. 1



[FIG. 1]

- a MEDIA CONTENT
- b CONTEXT DESCRIPTION DATA
- 101 THE SELECTION STEP
- 102 THE EXTRACTION STEP
- c SELECTION SEGMENT

〔図2〕

Fig. 2

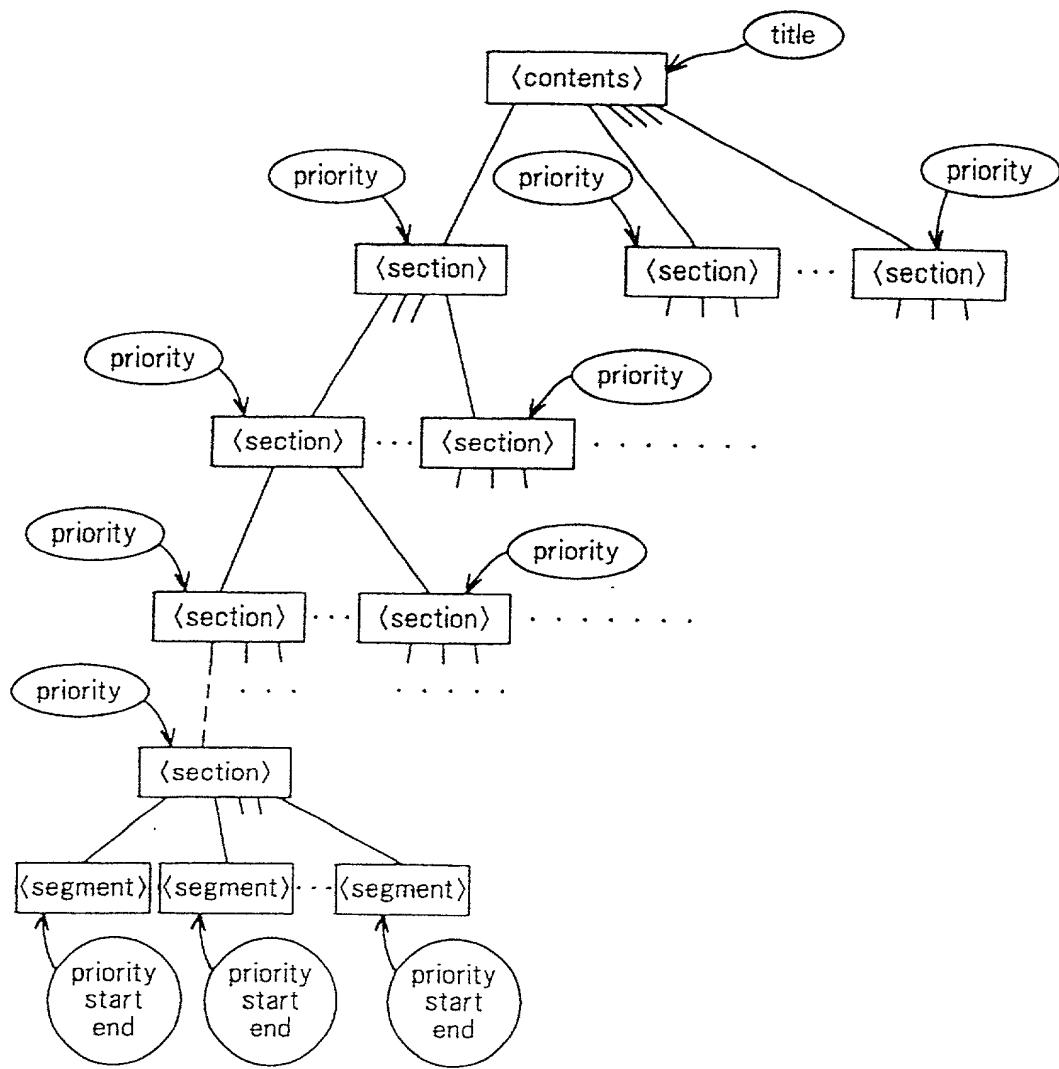


FIG. 3

DTD FOR DESCRIBING CONTEXT DESCRIPTION DATA THROUGH
USE OF XML

```
<?xml version="1.0"?>
```

```
<!ELEMENT contents      (section+)>
<!ATTLIST  contents    contents-id  CDATA      #REQUIRED
              title      CDATA      #REQUIRED
              runtime    NMTOKEN   #REQUIRED>
<!ELEMENT section       (section+|segment+)>
<!ATTLIST  section     caption     CDATA      #IMPLIED
              priority   NMTOKEN   #REQUIRED>
<!ELEMENT segment       EMPTY>
<!ATTLIST  segment     start      CDATA      #REQUIRED
              end       CDATA      #REQUIRED
              priority   NMTOKEN   #REQUIRED>
```

ONE EXAMPLE OF XML DOCUMENT RELATING TO CONTEXT DE
SCRIPTION DATA PREPARED BY DTD

```
<?xml version="1.0" encoding="euc-jp"?>
<!DOCTYPE contents SYSTEM "http://mserv.trl.mei.co.jp/SMML/program01.dtd">
```

```
<contents contents-id="urn:upi:mei:12345" title="GRAND SUMO TOUR
NAMENT" runtime="11:42">
  <section caption="SUMO WRESTLER 0 VS. SUMO WRESTLER 1"
priority="5">
    <section priority="1">
      <segment start="smpte=00:00:00:00" end="smpte=00:00:04:17" p
riority="1"/>
      <segment start="smpte=00:00:04:18" end="smpte=00:00:09:08" p
riority="1"/>
    </section>
    <section priority="2">
      <segment start="smpte=00:00:09:09" end="smpte=00:00:14:13"
```

FIG. 4

```
priority="2"/>
  </section>
  <section priority="3">
    <segment start="smpte=00:00:14:14" end="smpte=00:00:19:19" priority="3"/>
  </section>
  <section priority="1">
    <segment start="smpte=00:00:19:20" end="smpte=00:00:22:19" priority="1"/>
  </section>
  <section priority="3">
    <segment start="smpte=00:00:22:20" end="smpte=00:00:28:10" priority="3"/>
    <segment start="smpte=00:00:28:11" end="smpte=00:00:30:28" priority="3"/>
    <segment start="smpte=00:00:30:29" end="smpte=00:00:43:11" priority="3"/>
  </section>
  <section priority="2">
    <segment start="smpte=00:00:43:12" end="smpte=00:00:46:20" priority="2"/>
  </section>
  <section priority="3">
    <segment start="smpte=00:00:46:21" end="smpte=00:00:57:09" priority="3"/>
  </section>
  <section priority="2">
    <segment start="smpte=00:00:57:10" end="smpte=00:01:00:28" priority="2"/>
  </section>
  <section priority="4">
    <segment start="smpte=00:01:00:29" end="smpte=00:01:14:14" priority="4"/>
  </section>
  <section priority="2">
    <segment start="smpte=00:01:14:15" end="smpte=00:01:24:20"
```

FIG. 5

```
priority="2"/>
  </section>
  <section priority="3">
    <segment start="smpte=00:01:24:21" end="smpte=00:01:39:26" priority="3"/>
  </section>
  <section priority="2">
    <segment start="smpte=00:01:39:27" end="smpte=00:01:52:09" priority="2"/>
    <segment start="smpte=00:01:52:10" end="smpte=00:02:02:16" priority="2"/>
    <segment start="smpte=00:02:02:17" end="smpte=00:02:31:09" priority="2"/>
    <segment start="smpte=00:02:31:10" end="smpte=00:02:47:18" priority="3"/>
  </section>
  <section priority="1">
    <segment start="smpte=00:02:47:19" end="smpte=00:02:59:03" priority="1"/>
    <segment start="smpte=00:02:59:04" end="smpte=00:03:07:14" priority="1"/>
  </section>
  <section priority="2">
    <segment start="smpte=00:03:07:15" end="smpte=00:03:13:28" priority="2"/>
    <segment start="smpte=00:03:13:29" end="smpte=00:03:21:28" priority="2"/>
    <segment start="smpte=00:03:21:29" end="smpte=00:03:33:15" priority="2"/>
    <segment start="smpte=00:03:33:16" end="smpte=00:03:47:00" priority="2"/>
    <segment start="smpte=00:03:47:01" end="smpte=00:03:58:14" priority="2"/>
    <segment start="smpte=00:03:58:15" end="smpte=00:04:12:27" priority="2"/>
  </section>
```

FIG. 6

```
<section priority="3">
  <segment start="smpte=00:04:12:28" end="smpte=00:04:20:01" priority="3"/>
</section>
<section priority="4">
  <segment start="smpte=00:04:20:02" end="smpte=00:04:31:05" priority="4"/>
  <segment start="smpte=00:04:31:06" end="smpte=00:04:34:28" priority="4"/>
  <segment start="smpte=00:04:34:29" end="smpte=00:04:37:06" priority="4"/>
</section>
<section priority="5">
  <segment start="smpte=00:04:37:07" end="smpte=00:04:57:05" priority="5"/>
</section>
<section priority="5">
  <segment start="smpte=00:04:57:06" end="smpte=00:05:00:02" priority="5"/>
  <segment start="smpte=00:05:00:03" end="smpte=00:05:02:06" priority="4"/>
</section>
<section priority="2">
  <segment start="smpte=00:05:02:07" end="smpte=00:05:04:16" priority="2"/>
</section>
<section priority="4">
  <segment start="smpte=00:05:04:17" end="smpte=00:05:13:25" priority="4"/>
  <segment start="smpte=00:05:13:26" end="smpte=00:05:17:01" priority="4"/>
  <segment start="smpte=00:05:17:02" end="smpte=00:05:23:21" priority="3"/>
  <segment start="smpte=00:05:23:22" end="smpte=00:05:44:15" priority="4"/>
  <segment start="smpte=00:05:44:16" end="smpte=00:05:50:27"
```

FIG. 7

```
priority="4"/>
    <segment start="smpte=00:05:50:28" end="smpte=00:06:08:15" priority="4"/>
        <segment start="smpte=00:06:08:16" end="smpte=00:06:18:05" priority="4"/>
            <segment start="smpte=00:06:18:06" end="smpte=00:06:24:04" priority="4"/>
                <segment start="smpte=00:06:24:05" end="smpte=00:06:41:04" priority="4"/>
                    </section>
                </section>
            <section caption="SUMO WRESTLER 2 VS. SUMO WRESTLER 3" priority="4">
                <section priority="4">
                    <segment start="smpte=00:06:18:05" end="smpte=00:07:00:24" priority="4"/>
                    </section>
                <section priority="3">
                    <segment start="smpte=00:07:00:25" end="smpte=00:07:15:21" priority="3"/>
                    </section>
                <section priority="2">
                    <segment start="smpte=00:07:15:22" end="smpte=00:07:39:26" priority="1"/>
                    <segment start="smpte=00:07:39:27" end="smpte=00:07:46:02" priority="2"/>
                    <segment start="smpte=00:07:46:03" end="smpte=00:07:53:17" priority="2"/>
                    <segment start="smpte=00:07:53:18" end="smpte=00:08:01:21" priority="2"/>
                    <segment start="smpte=00:08:01:22" end="smpte=00:08:18:02" priority="2"/>
                    <segment start="smpte=00:08:18:03" end="smpte=00:08:39:05" priority="2"/>
                    <segment start="smpte=00:08:39:06" end="smpte=00:08:47:06" priority="2"/>
                    <segment start="smpte=00:08:47:07" end="smpte=00:09:03:27"
```

FIG. 8

```
priority="2"/>
    <segment start="smpte=00:09:03:28" end="smpte=00:09:07:20" p
riority="2"/>
</section>
<section priority="3">
    <segment start="smpte=00:09:07:21" end="smpte=00:09:16:26" p
riority="3"/>
    <segment start="smpte=00:09:16:27" end="smpte=00:09:20:25" p
riority="3"/>
</section>
<section priority="4">
    <segment start="smpte=00:09:20:26" end="smpte=00:09:22:27" p
riority="4"/>
</section>
<section priority="5">
    <segment start="smpte=00:09:22:28" end="smpte=00:09:48:11" p
riority="5"/>
</section>
<section priority="4">
    <segment start="smpte=00:09:48:12" end="smpte=00:09:51:27" p
riority="4"/>
</section>
<section priority="3">
    <segment start="smpte=00:09:51:28" end="smpte=00:09:57:01" p
riority="3"/>
    <segment start="smpte=00:09:57:02" end="smpte=00:10:12:21" p
riority="3"/>
</section>
<section priority="4">
    <segment start="smpte=00:10:12:22" end="smpte=00:10:41:17" p
riority="4"/>
</section>
<section priority="3">
    <segment start="smpte=00:10:41:18" end="smpte=00:11:28:17" p
riority="3"/>
</section>
```

FIG. 9

```
<section priority="1">
  <segment start="smpte=00:11:28:18" end="smpte=00:11:41:29" pr
  iority="1"/>
  </section>
  </section>
</contents>
```

FIG. 10

FOR DESCRIBING CONTEXT DESCRIPTION DATA THROUGH USE
OF XML

```
<?xml version="1.0"?>
```

```
<!ELEMENT contents      (section+)>
<!ATTLIST  contents  contents-id  CDATA      #REQUIRED
              title      CDATA      #REQUIRED
              runtime    NMTOKEN   #REQUIRED>
<!ELEMENT section       (section+|segment+)>
<!ATTLIST  section    section-id   CDATA      #REQUIRED
              caption    CDATA      #IMPLIED
              priority   NMTOKEN   #REQUIRED>
<!ELEMENT segment        (dominant-data*)>
<!ATTLIST  segment    start       CDATA      #REQUIRED
              end        CDATA      #REQUIRED
              priority   NMTOKEN   #REQUIRED>
<!ELEMENT dominant-data  EMPTY>
<!ATTLIST  dominant-data frame-no  NMTOKEN   #IMPLIED
              start     CDATA      #IMPLIED
              end      CDATA      #IMPLIED
              locator   CDATA      #IMPLIED>
```

ONE EXAMPLE OF XML DOCUMENT RELATING TO CONTEXT DE
SCRIPTION DATA PREPARED BY DTD

```
<?xml version="1.0" encoding="euc-jp"?>
<!DOCTYPE contents SYSTEM "http://mserv.trl.mei.co.jp/SMML/program03.dtd">
```

```
<contents contents-id="urn:upi:mei:12345" title="GRAND SUMO TOUR
NAMENT" runtime="11:42">
  <section caption="SUMO WRESTLER 0 VS. SUMO WRESTLER 1"
priority="5">
    <section priority="1">
      <segment start="smpte=00:00:00:00" end="smpte=00:00:04:17" priority="1">
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp01.gif"/>
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma01.mp3"/>
      <segment start="smpte=00:00:04:18" end="smpte=00:00:09:08" priority="1">
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp02.gif"/>
```

FIG. 11

```
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma02.m  
p3"/>  
    </segment>  
  </section>  
  <section priority="2">  
    <segment start="smpte=00:00:09:09" end="smpte=00:00:14:13" p  
riority="2">  
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp03.gi  
f"/>  
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma03.m  
p3"/>  
    </segment>  
  </section>  
  <section priority="3">  
    <segment start="smpte=00:00:14:14" end="smpte=00:00:19:19" p  
riority="3">  
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp04.gi  
f"/>  
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma04.m  
p3"/>  
    </segment>  
  </section>  
  <section priority="1">  
    <segment start="smpte=00:00:19:20" end="smpte=00:00:22:19" p  
riority="1">  
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp05.gi  
f"/>  
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma05.m  
p3"/>  
    </segment>  
  </section>  
  <section priority="3">  
    <segment start="smpte=00:00:22:20" end="smpte=00:00:28:10" p  
riority="3">  
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp06.gi  
f"/>  
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma06.m  
p3"/>  
    <segment start="smpte=00:00:28:11" end="smpte=00:00:30:28" p  
riority="3">  
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp07.gi  
f"/>  
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma07.m  
p3"/>
```

FIG. 12

```
<segment start="smpte=00:00:30:29" end="smpte=00:00:43:11" priority="3">
    <dominant-data start="smpte=00:00:31:20" end="smpte=00:00:35:05"/>
        </segment>
    </section>
    <section priority="2">
        <segment start="smpte=00:00:43:12" end="smpte=00:00:46:20" priority="2">
            <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp08.gif"/>
            <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma08.mp3"/>
        </segment>
    </section>
    <section priority="3">
        <segment start="smpte=00:00:46:21" end="smpte=00:00:57:09" priority="3">
            <dominant-data start="smpte=00:00:47:00" end="smpte=00:00:50:03"/>
            </segment>
        </section>
        <section priority="2">
            <segment start="smpte=00:00:57:10" end="smpte=00:01:00:28" priority="2">
                <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp09.gif"/>
                <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma09.mp3"/>
            </segment>
        </section>
        <section priority="4">
            <segment start="smpte=00:01:00:29" end="smpte=00:01:14:14" priority="4">
                <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp10.gif"/>
                <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma10.mp3"/>
            </segment>
        </section>
        <section priority="2">
            <segment start="smpte=00:01:14:15" end="smpte=00:01:24:20" priority="2">
                <dominant-data start="smpte=00:01:15:20" end="smpte=00:01:19:03"/>
            </segment>
        </section>
    </section>

```

FIG. 13

```
    </segment>
    </section>
    <section priority="3">
        <segment start="smpte=00:01:24:21" end="smpte=00:01:39:26" priority="3">
            <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp11.gif"/>
            <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma11.mp3"/>
        </segment>
        </section>
        <section priority="2">
            <segment start="smpte=00:01:39:27" end="smpte=00:01:52:09" priority="2">
                <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp12.gif"/>
                <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma12.mp3"/>
            </segment>
            <segment start="smpte=00:01:52:10" end="smpte=00:02:02:16" priority="2">
                <dominant-data start="smpte=00:01:52:20" end="smpte=00:01:55:10"/>
            </segment>
            <segment start="smpte=00:02:02:17" end="smpte=00:02:31:09" priority="2">
                <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp13.gif"/>
                <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma13.mp3"/>
            </segment>
            <segment start="smpte=00:02:31:10" end="smpte=00:02:47:18" priority="3">
                <dominant-data start="smpte=00:02:31:20" end="smpte=00:02:38:11"/>
            </segment>
        </section>
        <section priority="1">
            <segment start="smpte=00:02:47:19" end="smpte=00:02:59:03" priority="1">
                <dominant-data start="smpte=00:02:47:25" end="smpte=00:02:48:02"/>
            </segment>
            <segment start="smpte=00:02:59:04" end="smpte=00:03:07:14"
```

FIG. 14

```
priority="1">
    <dominant-data start="smpte=00:02:59:10" end="smpte=00:03:
02:12"/>
        </segment>
    </section>
    <section priority="2">
        <segment start="smpte=00:03:07:15" end="smpte=00:03:13:28" p
riority="2">
            <dominant-data start="smpte=00:03:08:12" end="smpte=00:03:
10:20"/>
            </segment>
            <segment start="smpte=00:03:13:29" end="smpte=00:03:21:28" p
riority="2">
                <dominant-data start="smpte=00:03:15:10" end="smpte=00:03:
18:03"/>
                </segment>
                <segment start="smpte=00:03:21:29" end="smpte=00:03:33:15" p
riority="2">
                    <dominant-data start="smpte=00:03:22:08" end="smpte=00:03:
25:02"/>
                    </segment>
                    <segment start="smpte=00:03:33:16" end="smpte=00:03:47:00" p
riority="2">
                        <dominant-data start="smpte=00:03:35:09" end="smpte=00:03:
38:21"/>
                        </segment>
                        <segment start="smpte=00:03:47:01" end="smpte=00:03:58:14" p
riority="2">
                            <dominant-data start="smpte=00:03:48:00" end="smpte=00:03:
51:17"/>
                            </segment>
                            <segment start="smpte=00:03:58:15" end="smpte=00:04:12:27" p
riority="2">
                                <dominant-data start="smpte=00:03:59:02" end="smpte=00:04:
01:07"/>
                                </segment>
                            </section>
                            <section priority="3">
                                <segment start="smpte=00:04:12:28" end="smpte=00:04:20:01" p
riority="3">
                                    <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp14.gi
f"/>
                                    <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma14.m
p3"/>
```

FIG. 15

```
    </segment>
  </section>
  <section priority="4">
    <segment start="smpte=00:04:20:02" end="smpte=00:04:31:05" priority="4">
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp15.gif"/>
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma15.mp3"/>
    </segment>
    <segment start="smpte=00:04:31:06" end="smpte=00:04:34:28" priority="4">
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp16.gif"/>
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma16.mp3"/>
    </segment>
    <segment start="smpte=00:04:34:29" end="smpte=00:04:37:06" priority="4">
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp17.gif"/>
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma17.mp3"/>
    </segment>
  </section>
  <section priority="5">
    <segment start="smpte=00:04:37:07" end="smpte=00:04:57:05" priority="5">
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp18.gif"/>
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma18.mp3"/>
    </segment>
  </section>
  <section priority="5">
    <segment start="smpte=00:04:57:06" end="smpte=00:05:00:02" priority="5">
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp19.gif"/>
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma19.mp3"/>
    </segment>
    <segment start="smpte=00:05:00:03" end="smpte=00:05:02:06" priority="4">
```

FIG. 16

```
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp20.gi
f"/>
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma20.m
p3"/>
            </segment>
        </section>
        <section priority="2">
            <segment start="smpte=00:05:02:07" end="smpte=00:05:04:16" p
riority="2">
                <dominant-data start="smpte=00:05:03:02" end="smpte=00:05:
02:20"/>
                </segment>
            </section>
            <section priority="4">
                <segment start="smpte=00:05:04:17" end="smpte=00:05:13:25" p
riority="4">
                    <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp21.gi
f"/>
                    <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma21.m
p3"/>
                    </segment>
                    <segment start="smpte=00:05:13:26" end="smpte=00:05:17:01" p
riority="4">
                        <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp22.gi
f"/>
                        <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma22.m
p3"/>
                        </segment>
                        <segment start="smpte=00:05:17:02" end="smpte=00:05:23:21" p
riority="3">
                            <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp23.gi
f"/>
                            <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma23.m
p3"/>
                            </segment>
                            <segment start="smpte=00:05:23:22" end="smpte=00:05:44:15" p
riority="4">
                                <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp24.gi
f"/>
                                <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma24.m
p3"/>
                                </segment>
                                <segment start="smpte=00:05:44:16" end="smpte=00:05:50:27" p
riority="4">
```

FIG. 17

```
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp25.gi
f"/>
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma25.m
p3"/>
        </segment>
        <segment start="smpte=00:05:50:28" end="smpte=00:06:08:15" p
riority="4">
            <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp26.gi
f"/>
            <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma26.m
p3"/>
            </segment>
            <segment start="smpte=00:06:08:16" end="smpte=00:06:18:05" p
riority="4">
                <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp27.gi
f"/>
                <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma27.m
p3"/>
                </segment>
                <segment start="smpte=00:06:18:06" end="smpte=00:06:24:04" p
riority="4">
                    <dominant-data start="smpte=00:06:18:25" end="smpte=00:06:
20:17"/>
                    </segment>
                    <segment start="smpte=00:06:24:05" end="smpte=00:06:41:04" p
riority="4">
                        <dominant-data start="smpte=00:06:25:01" end="smpte=00:06:
30:11"/>
                        </segment>
                    </section>
                </section>
                <section caption="SUMO WRESTLER 2 VS. SUMO WRESTLER 3" p
riority="4">
                    <section priority="4">
                        <segment start="smpte=00:06:18:05" end="smpte=00:07:00:24" p
riority="4">
                            <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp28.gi
f"/>
                            <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma28.m
p3"/>
                            </segment>
                        </section>
                        <section priority="3">
                            <segment start="smpte=00:07:00:25" end="smpte=00:07:15:21" p
riority="3">
```

FIG. 18

```
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp29.gi
f"/>
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma29.m
p3"/>
        </segment>
    </section>
    <section priority="2">
        <segment start="smpte=00:07:15:22" end="smpte=00:07:39:26" p
riority="1">
            <dominant-data start="smpte=00:07:16:05" end="smpte=00:07:
18:23"/>
            </segment>
            <segment start="smpte=00:07:39:27" end="smpte=00:07:46:02" p
riority="2">
                <dominant-data start="smpte=00:07:41:28" end="smpte=00:07:
43:01"/>
                </segment>
                <segment start="smpte=00:07:46:03" end="smpte=00:07:53:17" p
riority="2">
                    <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp30.gi
f"/>
                    <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma30.m
p3"/>
                    </segment>
                    <segment start="smpte=00:07:53:18" end="smpte=00:08:01:21" p
riority="2">
                        <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp31.gi
f"/>
                        <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma31.m
p3"/>
                        </segment>
                        <segment start="smpte=00:08:01:22" end="smpte=00:08:18:02" p
riority="2">
                            <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp32.gi
f"/>
                            <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma32.m
p3"/>
                            </segment>
                            <segment start="smpte=00:08:18:03" end="smpte=00:08:39:05" p
riority="2">
                                <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp33.gi
f"/>
                                <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma33.m
p3"/>
```

FIG. 19

```
    </segment>
    <segment start="smpte=00:08:39:06" end="smpte=00:08:47:06" priority="2">
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp34.gif"/>
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma34.mp3"/>
    </segment>
    <segment start="smpte=00:08:47:07" end="smpte=00:09:03:27" priority="2">
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp35.gif"/>
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma35.mp3"/>
    </segment>
    <segment start="smpte=00:09:03:28" end="smpte=00:09:07:20" priority="2">
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp36.gif"/>
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma36.mp3"/>
    </segment>
    </section>
    <section priority="3">
        <segment start="smpte=00:09:07:21" end="smpte=00:09:16:26" priority="3">
            <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp37.gif"/>
            <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma37.mp3"/>
        </segment>
        <segment start="smpte=00:09:16:27" end="smpte=00:09:20:25" priority="3">
            <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp38.gif"/>
            <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma38.mp3"/>
        </segment>
        </section>
        <section priority="4">
            <segment start="smpte=00:09:20:26" end="smpte=00:09:22:27" priority="4">
                <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp39.gif"/>
            </segment>
        </section>
    </section>
```

FIG. 20

```
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma39.m
p3"/>
    </segment>
</section>
<section priority="5">
    <segment start="smpte=00:09:22:28" end="smpte=00:09:48:11" p
riority="5">
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp40.gi
f"/>
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma40.m
p3"/>
        </segment>
    </section>
    <section priority="4">
        <segment start="smpte=00:09:48:12" end="smpte=00:09:51:27" p
riority="4">
            <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp41.gi
f"/>
            <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma41.m
p3"/>
            </segment>
        </section>
        <section priority="3">
            <segment start="smpte=00:09:51:28" end="smpte=00:09:57:01" p
riority="3">
                <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp42.gi
f"/>
                <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma42.m
p3"/>
                </segment>
            <segment start="smpte=00:09:57:02" end="smpte=00:10:12:21" p
riority="3">
                <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp43.gi
f"/>
                <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma43.m
p3"/>
                </segment>
            </section>
            <section priority="4">
                <segment start="smpte=00:10:12:22" end="smpte=00:10:41:17" p
riority="4">
                    <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp44.gi
f"/>
                    <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma44.
```

FIG. 21

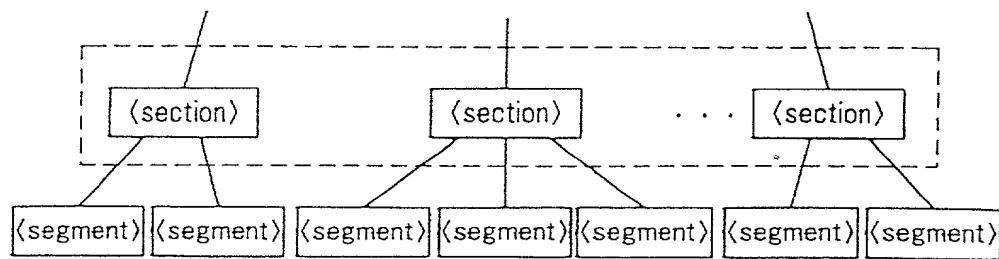
```
mp3"/>
  </segment>
</section>
<section priority="3">
  <segment start="smpte=00:10:41:18" end="smpte=00:11:28:17" priority="3">
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp45.gif"/>
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma45.mp3"/>
  </segment>
</section>
<section priority="1">
  <segment start="smpte=00:11:28:18" end="smpte=00:11:41:29" priority="1">
    <dominant-data start="smpte=00:11:29:13" end="smpte=11:32:21">
    </segment>
  </section>
</section>
</contents>
```

【図21】

```
mp3"/>
  </segment>
</section>
<section priority="3">
  <segment start="smpte=00:10:41:18" end="smpte=00:11:28:17"
priority="3">
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp45.
gif"/>
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma45.
mp3"/>
  </segment>
</section>
<section priority="1">
  <segment start="smpte=00:11:28:18" end="smpte=00:11:41:29"
priority="1">
    <dominant-data start="smpte=00:11:29:13" end="smpte=11:32:
21"/>
  </segment>
</section>
</section>
</contents>
```

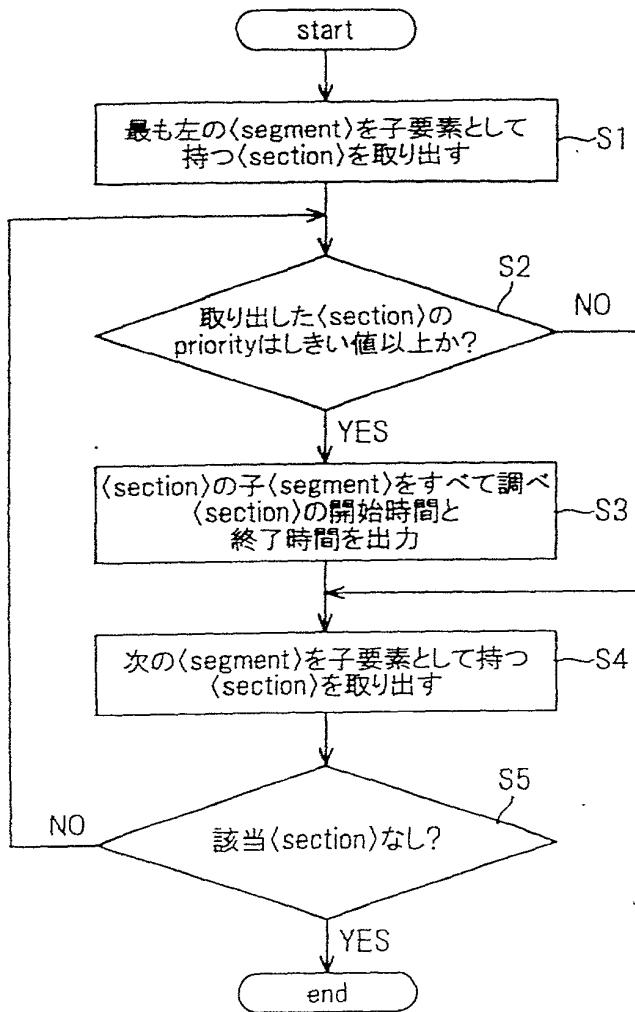
【図22】

Fig. 22



【図 23】

Fig. 23



[FIG. 23]

S1 EXTRACT LEFT-MOST ELEMENT <section> HAVING ^{CHILDREN} <successor> <segment>

S2 DOES PRIORITY VALUE OF THE EXTRACTED ELEMENT <section> EXCEED THRESHOLD VALUE?

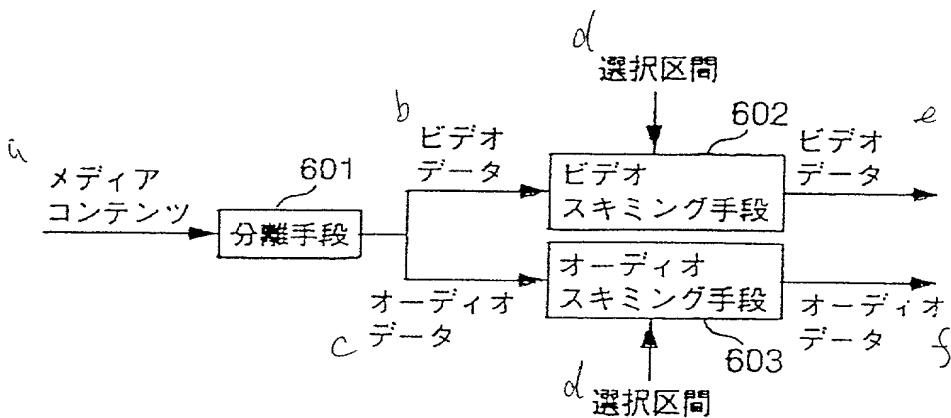
S3 EXAMINE ALL ^{CHILDREN} <successor> <segment> OF THE ELEMENT <section>, AND OUTPUT START TIME AND END TIME OF THE ELEMENT <section>

S4 EXTRACT NEXT ELEMENT <section> HAVING ^{CHILDREN} <successor> <segment>

S5 IS THERE NO CORRESPONDING ELEMENT <section>?

【図24】

Fig. 24



[FIG. 24]

a MEDIA CONTENT
DEMULTIPLEX
601 SEPARATION MEANS

b VIDEO DATA

c AUDIO DATA

d SELECTION SEGMENT

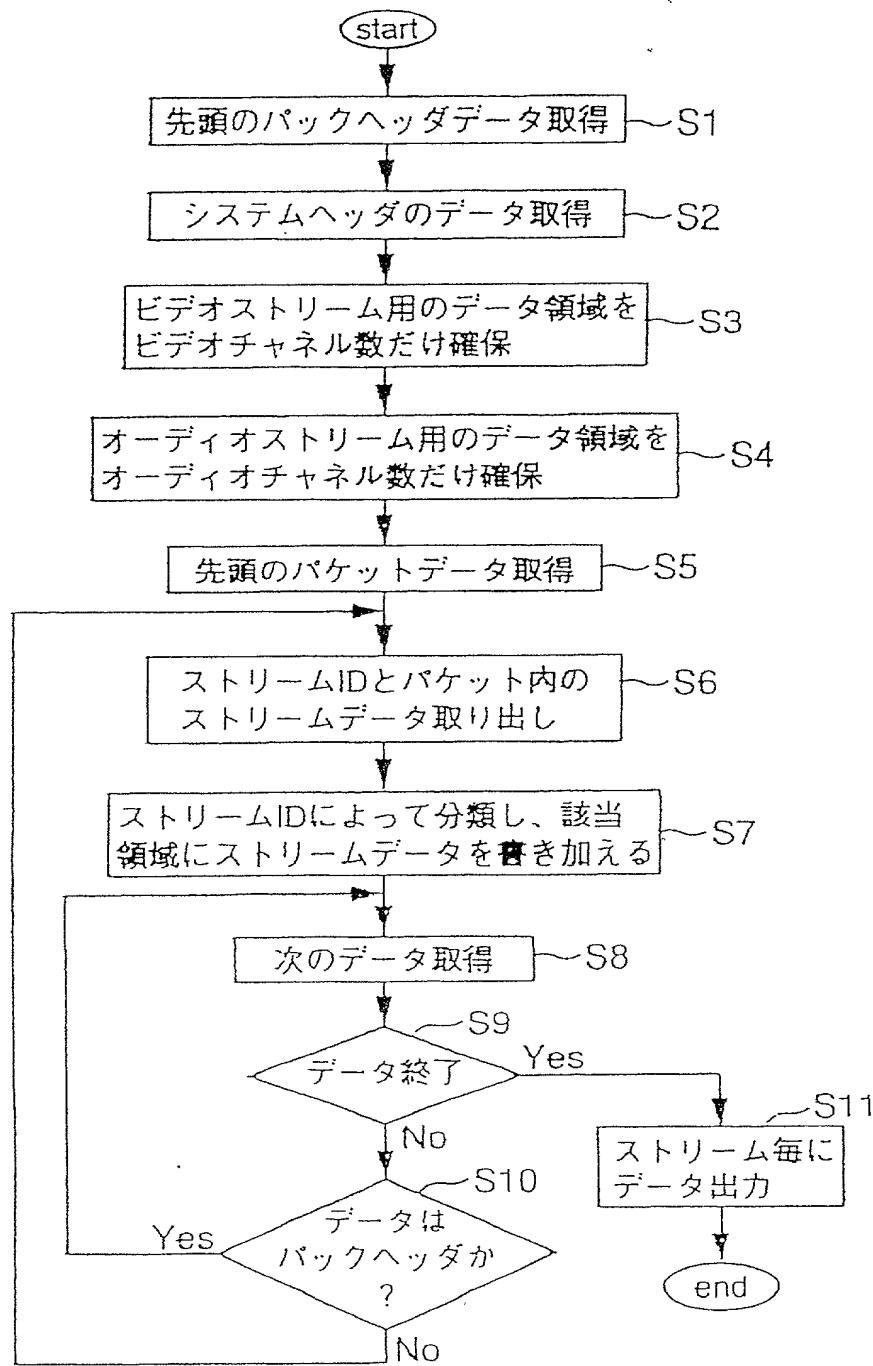
602 VIDEO SKIMMING MEANS

603 AUDIO SKIMMING MEANS

d SELECTION SEGMENT

e VIDEO DATA

f AUDIO DATA



S1 ACQUIRE HEADER DATA FROM HEAD PACK

S2 ACQUIRE DATA FROM SYSTEM HEADER

S3 ENSURE DATA LOCATIONS FOR STORING VIDEO STREAM WHICH IS EQUAL IN NUMBER TO
VIDEO CHANNELSS4 ENSURE DATA LOCATIONS FOR STORING AUDIO STREAM WHICH IS EQUAL IN NUMBER TO
AUDIO CHANNELS

S5 ACQUIRE DATA FROM HEADER PACKET

S6 ACQUIRE STREAM ID, AND STREAM DATA WITHIN PACKET

S7 CLASSIFY STREAM DATA ACCORDING TO STREAM ID, AND ADDITIONALLY WRITE STREAM DATA
INTO CORRESPONDING LOCATION

S8 ACQUIRE NEXT

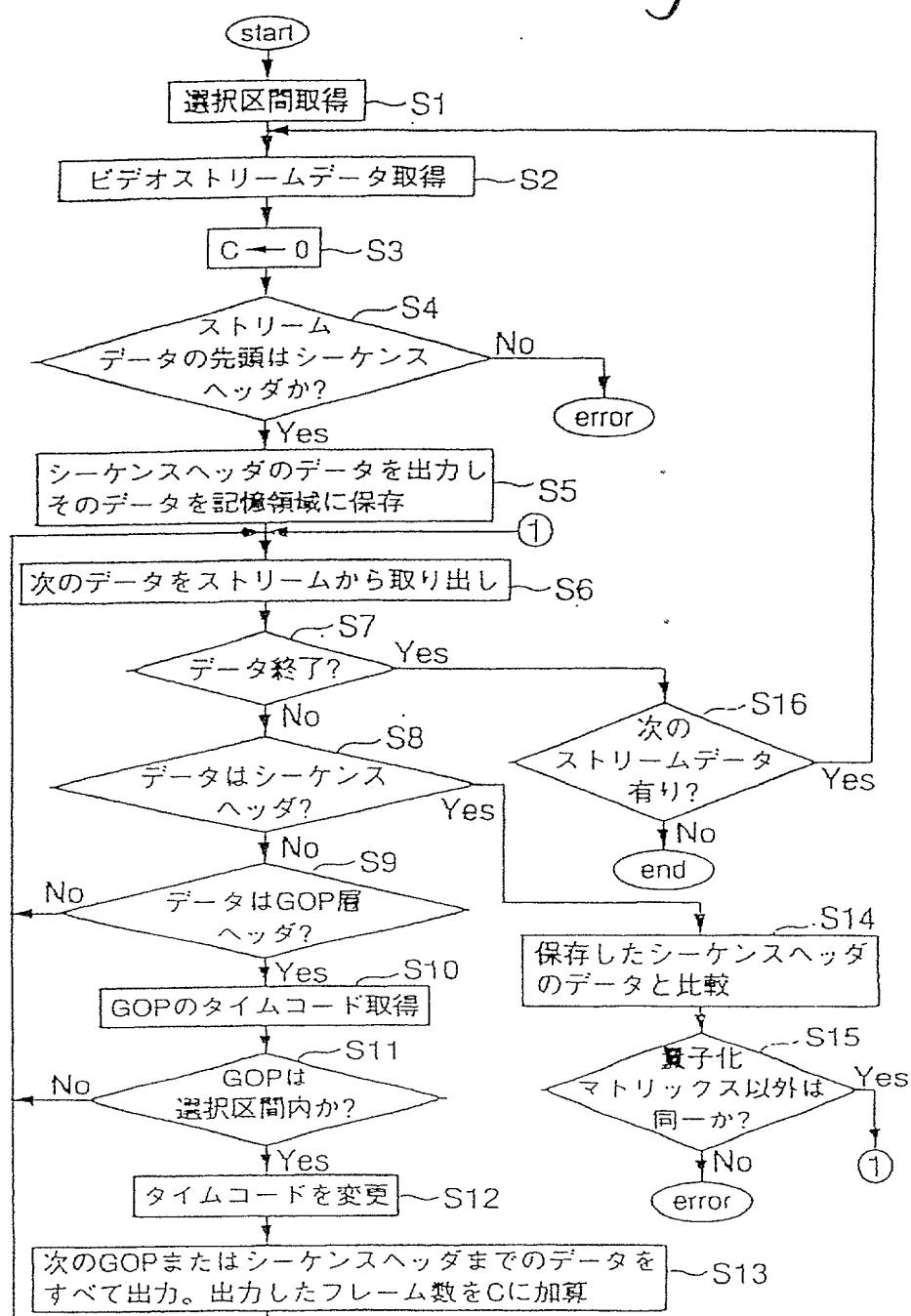
S9 END OF DATA

S10 DO DATA CORRESPOND TO PACK HEADER?

S11 OUTPUT DATA FOR EACH STREAM

【図26】

Fig. 26



S1 ACQUIRE SELECTION SEGMENT

S2 ACQUIRE VIDEO STREAM DATA

S4 DOES HEAD OF STREAM DATA CORRESPOND TO SEQUENCE HEADER?

S5 OUTPUT DATA PERTAINING TO SEQUENCE HEADER, AND RESERVE THE DATA INTO MEMORY LOCATION

S6 ACQUIRE NEXT DATA FROM STREAM

S7 END OF DATA?

S8 DO DATA CORRESPOND TO SEQUENCE HEADER?

S9 DO DATA CORRESPOND TO HEADER OF GOP LAYER?

S10 ACQUIRE TIME CODE OF GOP

S11 IS GOP LOCATED WITHIN SELECTION SEGMENT?

S12 CHANGE TIME CODE

S13 OUTPUT ALL DATA UP TO NEXT GOP OR SEQUENCE HEADER, ADD NUMBER OF OUTPUT FRAMES TO COUNTER

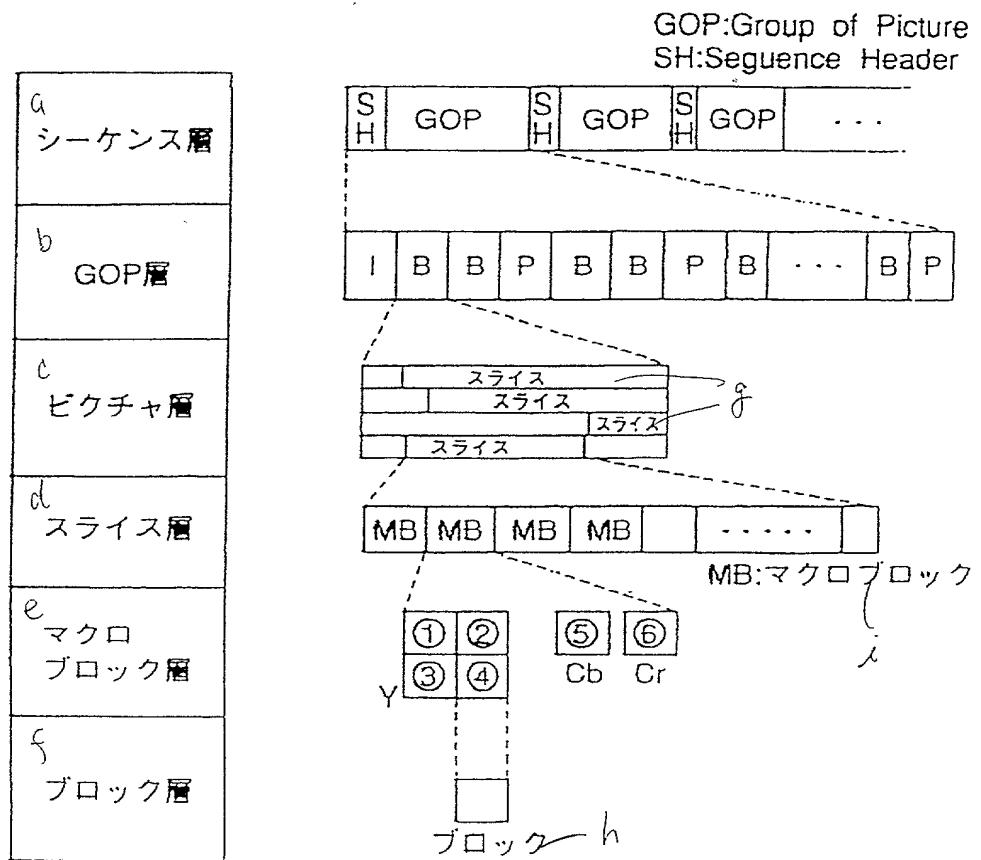
S14 COMPARE RESERVED SEQUENCE HEADER AND DATA

S15 ARE DATA IDENTICAL WITH SEQUENCE HEADER, EXCEPT FOR QUANTIZATION MATRIX?

S16 ARE THERE NEXT STREAM DATA?

【図27】

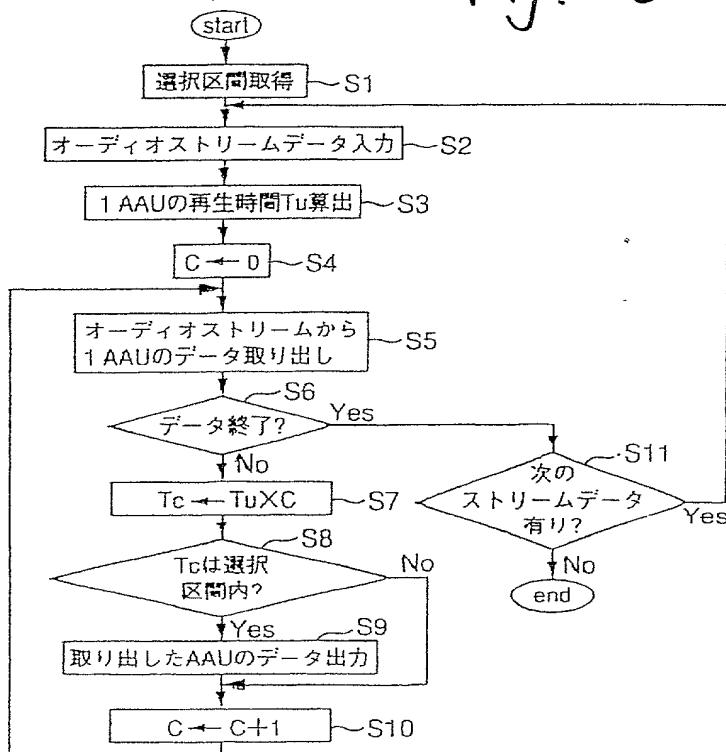
Fig. 27



[FIG. 27]

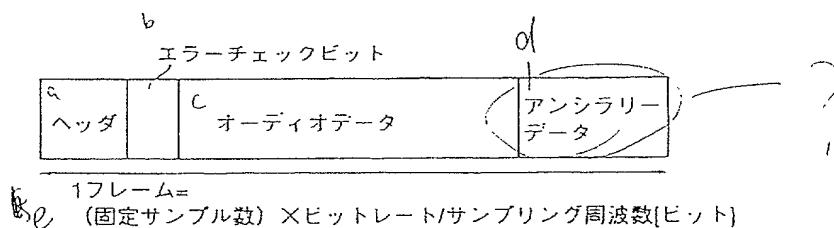
- a SEQUENCE LAYER
- b GOP LAYER
- c PICTURE LAYER
- d SLICE LAYER
- e MACRO BLOCK LAYER
- f BLOCK LAYER
- g SLICE
- h BLOCK
- i MACRO BLOCK

Fig. 28



[図 29]

Fig. 29



[FIG. 28]

S1 ACQUIRE SELECTION SEGMENT

S2 INPUT AUDIO STREAM DATA

S3 CALCULATE TIME Tu REQUIRED FOR PLAYING BACK SINGLE AAU

S5 ACQUIRE DATA PERTAINING SINGLE AAU FROM AUDIO STREAM

S6 END OF DATA?

S8 DOES Tc LOCATE WITHIN SELECTION SEGMENT?

S9 OUTPUT DATA PERTAINING TO ACQUIRED AAU

S11 ARE THERE NEXT STREAM DATA?

[FIG. 29]

a HEADER

b ERROR CHECK BIT

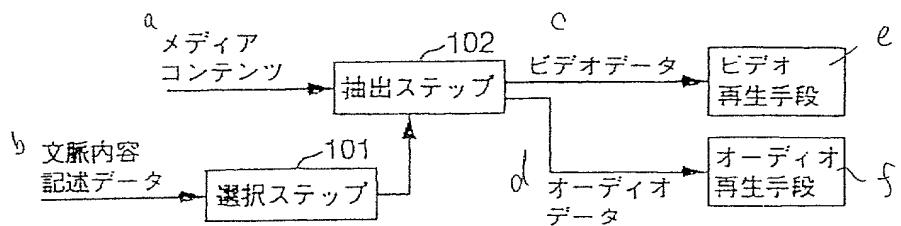
c AUDIO DATA

d UNSERIALLY DATA

e SINGLE FRAME = (NUMBER OF FIXED SAMPLES) X BIT RATE/SAMPLING FREQUENCY (BIT)

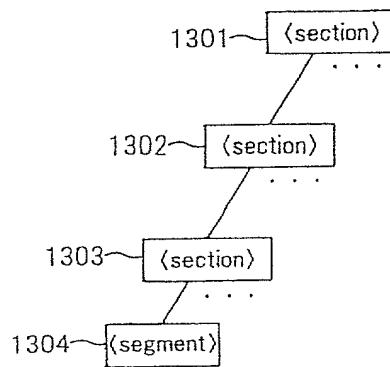
【図30】

Fig. 30



【図31】

Fig. 31

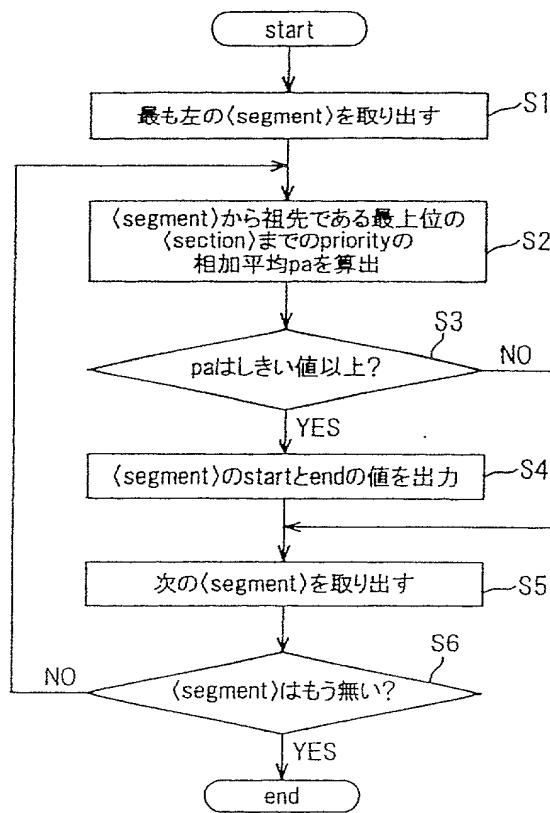


[FIG. 30]

- a MEDIA CONTENT
- b CONTEXT DESCRIPTION DATA
- 101 THE SELECTION STEP
- 102 THE EXTRACTION STEP
- VIDEO DATA
- AUDIO DATA
- VIDEO PLAYBACK MEANS
- AUDIO PLAYBACK MEANS

【図32】

Fig. 32



[FIG. 32]

S1 ACQUIRE LEFTMOST ELEMENT <segment>

S2 CALCULATE ARITHMETIC MEAN pa OF PRIORITY VALUES OF ELEMENTS FROM <segment> TO ANCESTOR <section> OF THE HIGHEST HIERARCHICAL LEVEL

S3 DOES pa EXCEED THRESHOLD VALUE?

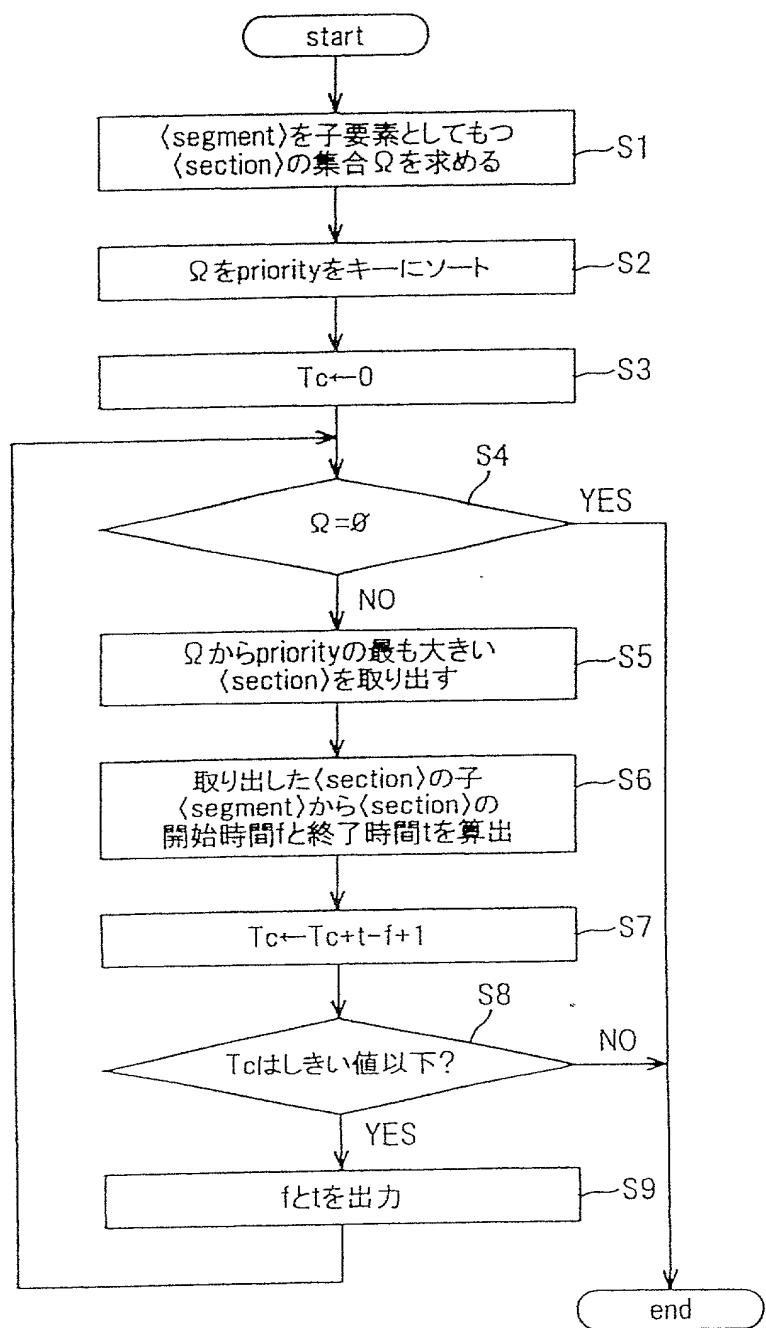
S4 OUTPUT VALUES RELATING TO "start" AND "end" OF ELEMENT <segment>

S5 ACQUIRE NEXT ELEMENT <segment>

S6 DOES THERE <segment> EXIST ANY MORE?

[図33]

Fig.33



[FIG. 33]

S1 OBTAIN SET Ω OF ELEMENTS $\langle \text{section} \rangle$ HAVING ~~SUCCESSORS~~ $\langle \text{segment} \rangle$

S2 SORT ELEMENTS OF SET Ω IN SEQUENCE OF PRIORITY

S5 ACQUIRE ELEMENT $\langle \text{section} \rangle$ HAVING HIGHEST PRIORITY FROM ELEMENTS IN SET Ω

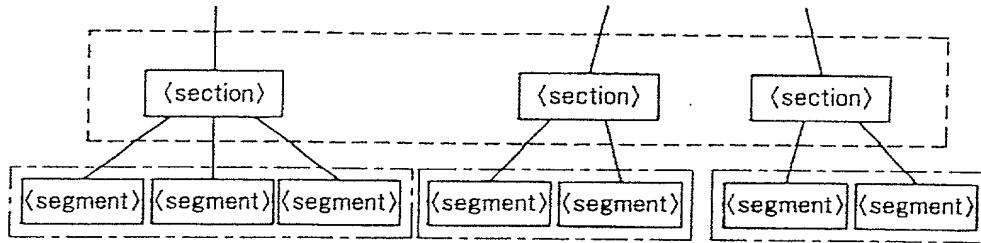
S6 CALCULATE START TIME "f" AND END TIME "t" OF ELEMENT $\langle \text{section} \rangle$ FROM ITS ~~SUCCESSOR~~ $\langle \text{segment} \rangle$

S8 IS T_c LOWER THAN THRESHOLD VALUE?

S9 OUTPUT "f" AND "t"

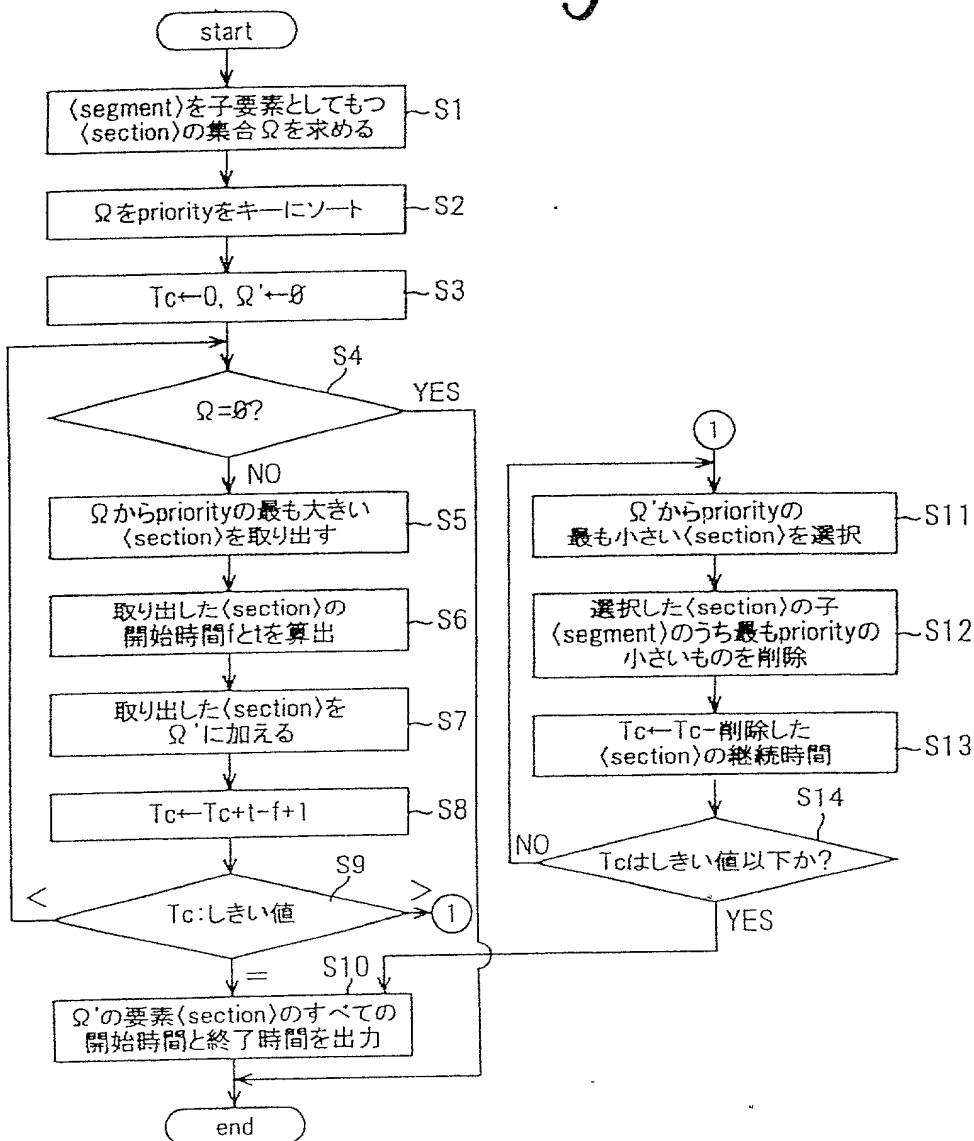
【図 34】

Fig. 34



[図35]

Fig. 35



[FIG. 35]

S1 SEEK SET Ω OF ELEMENTS $\langle \text{section} \rangle$ HAVING $\text{SUCCESSORS} \langle \text{segment} \rangle$
 S2 SORT ELEMENTS OF SET Ω IN SEQUENCE OF PRIORITY
 S3 ACQUIRE ELEMENT $\langle \text{section} \rangle$ HAVING HIGHEST PRIORITY FROM ELEMENTS IN SET Ω
 S4 CHILDREN
 S5 CALCULATE START TIME "t" AND END TIME "f" OF ELEMENT $\langle \text{section} \rangle$ FROM SUCCESSOR
 $\langle \text{segment} \rangle$ OF THE ELEMENT $\langle \text{section} \rangle$
 S6 ADD ACQUIRED $\langle \text{section} \rangle$ TO SET Ω'
 S7 Tc: THRESHOLD VALUE
 S8 S10 OUTPUT DATA SETS RELATING TO START TIME AND END TIME OF ALL ELEMENTS $\langle \text{section} \rangle$ OF
 SET Ω'
 S9 SELECT ELEMENT $\langle \text{section} \rangle$ HAVING MINIMUM PRIORITY FROM SET Ω'
 S10 CHILDREN
 S11 DELETE $\text{SUCCESSOR} \langle \text{segment} \rangle$ HAVING MINIMUM PRIORITY FROM AMONG SUCCESSORS OF
 SELECTED ELEMENTS $\langle \text{section} \rangle$
 S12 DURATION OF ELEMENT $\langle \text{section} \rangle$ FROM WHICH Tc IS DELETED
 S13 IS Tc LOWER THAN THRESHOLD VALUE?

【図36】

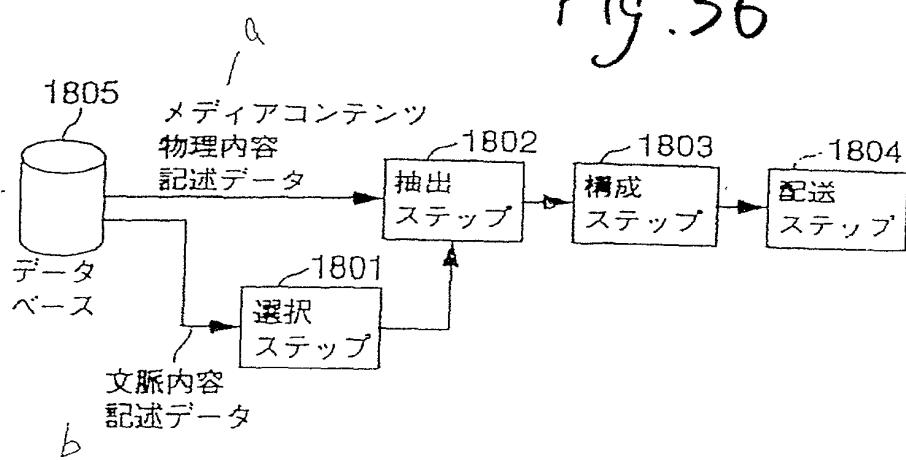


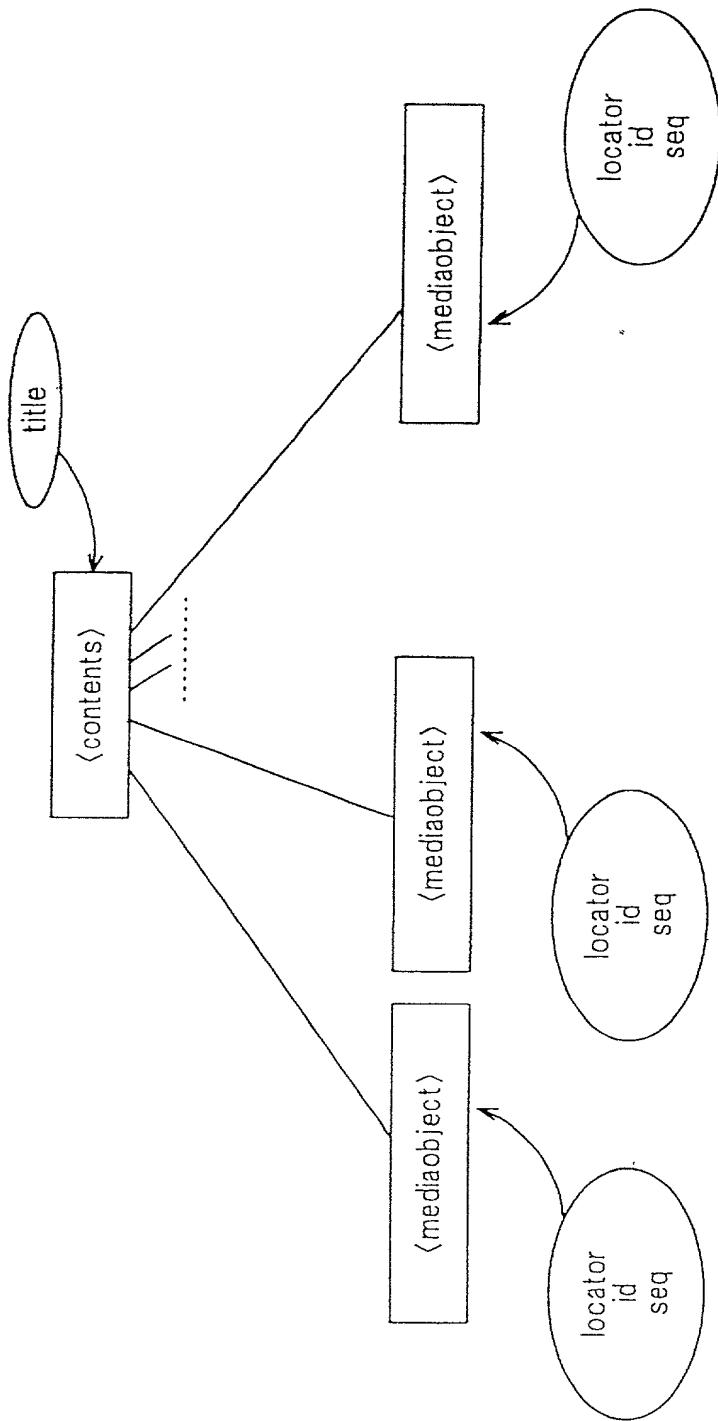
Fig. 36

[FIG. 36]

- 1805 DATABASE
- a MEDIA CONTENT, PHYSICAL DESCRIPTION DATA
- b CONTEXT DESCRIPTION DATA
- 1801 THE SELECTION STEP
- 1802 THE EXTRACTION STEP
- 1803 THE FORMATION STEP
- 1804 THE DELIVERY STEP

【図 37】

Fig. 37



【図38】

Fig.38

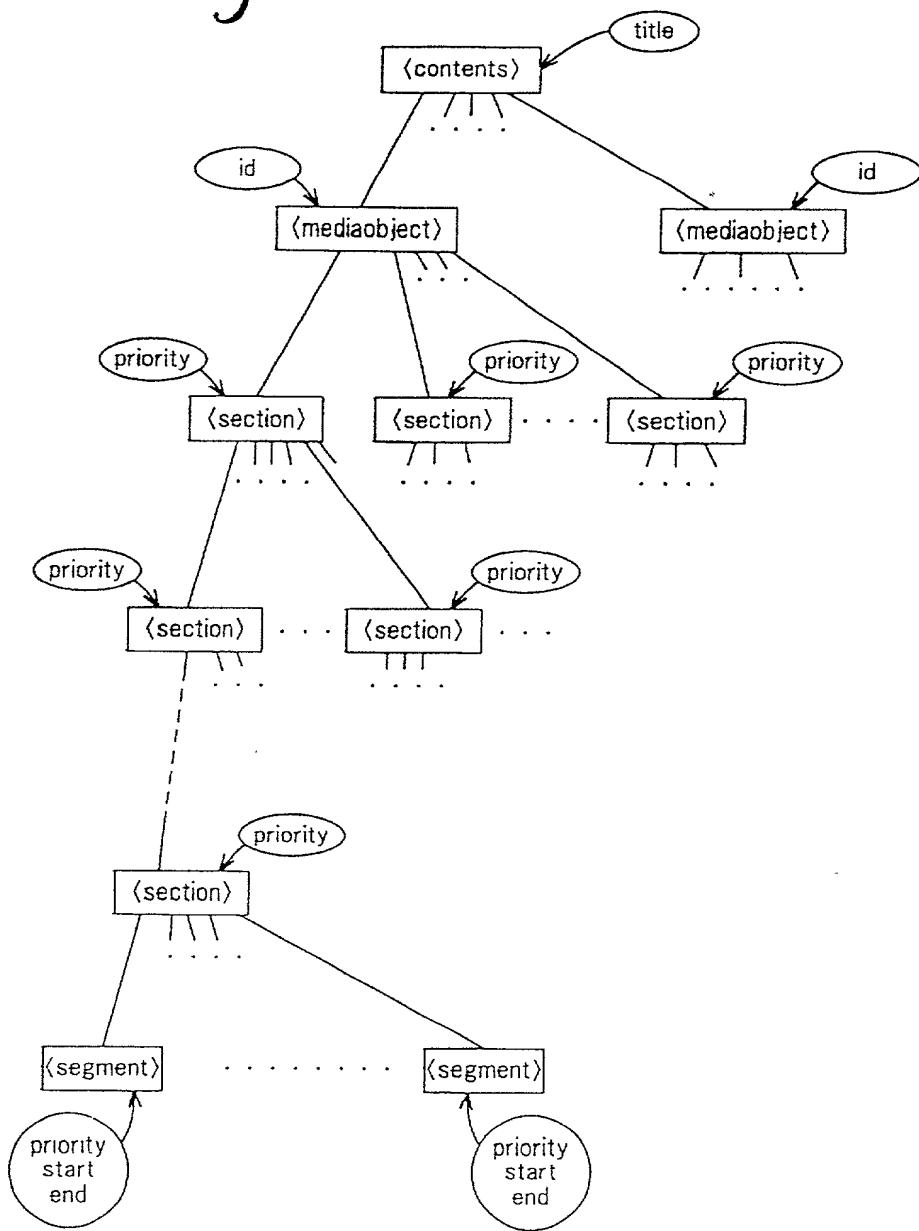


FIG. 39

ONE EXAMPLE OF DTD USED FOR DESCRIBING STRUCTURE DESCRIPTION DATA

```
<?xml version="1.0"?>

<!ENTITY % types "(audio|video|audiovideo)">
<!ENTITY % formats "(mpeg1-system|mpeg1-video|mpeg-audio|mpeg
2-ps|mpeg2-ts|mpeg2-video)">
<!ELEMENT contents (mediaobject+)>
<!ATTLIST contents contents-id CDATA #REQUIRED
                  title     CDATA #REQUIRED
                  runtime   NMTOKEN #REQUIRED>
<!ELEMENT mediaobject EMPTY>
<!ATTLIST mediaobject id      CDATA #REQUIRED
                  type    %types; "audiovideo"
                  format  %formats; #REQUIRED
                  seq     NMTOKEN #REQUIRED
                  locator CDATA #REQUIRED>
```

ONE EXAMPLE OF XML DOCUMENT RELATING TO PHYSICAL DESCRIPTION DATA

```
<?xml version="1.0" encoding="euc-jp"?>
<!DOCTYPE contents SYSTEM "http://mserv.trl.mei.co.jp/SMML/program06.dtd">

<contents contents-id="urn:upi:mei:12345" title="GRAND SUMO TOUR
NAMENT" runtime="11:42">
  <mediaobject id="mobj-01" type="audiovideo" format="mpeg1-system"
                seq="1" locator="sumou01.mpg"/>
  <mediaobject id="mobj-02" type="audiovideo" format="mpeg1-system"
                seq="2" locator="sumou02.mpg"/>
</contents>
```

FIG. 40

ONE EXAMPLE OF DTD USED FOR DESCRIBING CONTEXT DESCRIPTION DATA

```
<?xml version="1.0"?>

<!ELEMENT contents      (mediaobject+)>
<!ATTLIST  contents    contents-id  CDATA      #REQUIRED
              title      CDATA      #REQUIRED
              runtime    NMTOKEN   #REQUIRED>
<!ELEMENT mediaobject  (section+)>
<!ATTLIST  mediaobject id        CDATA      #REQUIRED>
<!ELEMENT section       (section+|segment+)>
<!ATTLIST  section      caption    CDATA      #IMPLIED
              priority   NMTOKEN   #REQUIRED>
<!ELEMENT segment       EMPTY>
<!ATTLIST  segment      start      CDATA      #REQUIRED
              end        CDATA      #REQUIRED
              priority   NMTOKEN   #REQUIRED>
```

ONE EXAMPLE OF XML DOCUMENT RELATING TO STRUCTURE DESCRIPTION DATA

```
<?xml version="1.0" encoding="euc-jp"?>
<!DOCTYPE contents SYSTEM "http://mserv.trl.mei.co.jp/SMML/program07.dtd">

<contents contents-id="urn:upi:mei:12345" title="GRAND SUMO TOUR NAMENT
" runtime="11:42">
  <mediaobject id="mobj-01">
    <section caption="SUMO WRESTLER 0 VS. SUMO WRESTLER 1" priority="5">
      <section priority="1">
        <segment start="smpte=00:00:00:00" end="smpte=00:00:04:17" priority="1"/>
        <segment start="smpte=00:00:04:18" end="smpte=00:00:09:08" priority="1"/>
      </section>
      <section priority="2">
        <segment start="smpte=00:00:09:09" end="smpte=00:00:14:13" priority="2"/>
      </section>
      <section priority="3">
        <segment start="smpte=00:00:14:14" end="smpte=00:00:19:19"
```

FIG. 41

```
" priority="3"/>
  </section>
  <section priority="1">
    <segment start="smpte=00:00:19:20" end="smpte=00:00:22:19"
priority="1"/>
  </section>
  <section priority="3">
    <segment start="smpte=00:00:22:20" end="smpte=00:00:28:10"
priority="3"/>
    <segment start="smpte=00:00:28:11" end="smpte=00:00:30:28"
priority="3"/>
    <segment start="smpte=00:00:30:29" end="smpte=00:00:43:11"
priority="3"/>
  </section>
  <section priority="2">
    <segment start="smpte=00:00:43:12" end="smpte=00:00:46:20"
priority="2"/>
  </section>
  <section priority="3">
    <segment start="smpte=00:00:46:21" end="smpte=00:00:57:09"
priority="3"/>
  </section>
  <section priority="2">
    <segment start="smpte=00:00:57:10" end="smpte=00:01:00:28"
priority="2"/>
  </section>
  <section priority="4">
    <segment start="smpte=00:01:00:29" end="smpte=00:01:14:14"
priority="4"/>
  </section>
  <section priority="2">
    <segment start="smpte=00:01:14:15" end="smpte=00:01:24:20"
priority="2"/>
  </section>
  <section priority="3">
    <segment start="smpte=00:01:24:21" end="smpte=00:01:39:26"
priority="3"/>
  </section>
  <section priority="2">
    <segment start="smpte=00:01:39:27" end="smpte=00:01:52:09"
priority="2"/>
    <segment start="smpte=00:01:52:10" end="smpte=00:02:02:16"
priority="2"/>
    <segment start="smpte=00:02:02:17" end="smpte=00:02:31:09"
priority="2"/>
```

FIG. 42

```
<segment start="smpte=00:02:31:10" end="smpte=00:02:47:18"
priority="3"/>
</section>
<section priority="1">
    <segment start="smpte=00:02:47:19" end="smpte=00:02:59:03"
priority="1"/>
    <segment start="smpte=00:02:59:04" end="smpte=00:03:07:14"
priority="1"/>
    </section>
    <section priority="2">
        <segment start="smpte=00:03:07:15" end="smpte=00:03:13:28"
priority="2"/>
        <segment start="smpte=00:03:13:29" end="smpte=00:03:21:28"
priority="2"/>
        <segment start="smpte=00:03:21:29" end="smpte=00:03:33:15"
priority="2"/>
        <segment start="smpte=00:03:33:16" end="smpte=00:03:47:00"
priority="2"/>
        <segment start="smpte=00:03:47:01" end="smpte=00:03:58:14"
priority="2"/>
        <segment start="smpte=00:03:58:15" end="smpte=00:04:12:27"
priority="2"/>
        </section>
        <section priority="3">
            <segment start="smpte=00:04:12:28" end="smpte=00:04:20:01"
priority="3"/>
            </section>
            <section priority="4">
                <segment start="smpte=00:04:20:02" end="smpte=00:04:31:05"
priority="4"/>
                <segment start="smpte=00:04:31:06" end="smpte=00:04:34:28"
priority="4"/>
                <segment start="smpte=00:04:34:29" end="smpte=00:04:37:06"
priority="4"/>
                </section>
                <section priority="5">
                    <segment start="smpte=00:04:37:07" end="smpte=00:04:57:05"
priority="5"/>
                    </section>
                    <section priority="5">
                        <segment start="smpte=00:04:57:06" end="smpte=00:05:00:02"
priority="5"/>
                        <segment start="smpte=00:05:00:03" end="smpte=00:05:02:06"
priority="4"/>
                    </section>
                
```

FIG. 43

```
<section priority="2">
    <segment start="smpte=00:05:02:07" end="smpte=00:05:04:16"
priority="2"/>
    </section>
    <section priority="4">
        <segment start="smpte=00:05:04:17" end="smpte=00:05:13:25"
priority="4"/>
        <segment start="smpte=00:05:13:26" end="smpte=00:05:17:01"
priority="4"/>
        <segment start="smpte=00:05:17:02" end="smpte=00:05:23:21"
priority="3"/>
        <segment start="smpte=00:05:23:22" end="smpte=00:05:44:15"
priority="4"/>
        <segment start="smpte=00:05:44:16" end="smpte=00:05:50:27"
priority="4"/>
        <segment start="smpte=00:05:50:28" end="smpte=00:06:08:15"
priority="4"/>
        <segment start="smpte=00:06:08:16" end="smpte=00:06:18:05"
priority="4"/>
        <segment start="smpte=00:06:18:06" end="smpte=00:06:24:04"
priority="4"/>
        <segment start="smpte=00:06:24:05" end="smpte=00:06:41:04"
priority="4"/>
    </section>
    </section>
</mediaobject>
<mediaobject id="mobj-02">
    <section caption="SUMO WRESTLER 2 VS. SUMO WRESTLER
3" priority="4">
        <section priority="4">
            <segment start="smpte=00:00:00:00" end="smpte=00:00:42:24"
priority="4"/>
        </section>
        <section priority="3">
            <segment start="smpte=00:00:42:25" end="smpte=00:00:57:21"
priority="3"/>
        </section>
        <section priority="2">
            <segment start="smpte=00:00:57:22" end="smpte=00:01:21:26"
priority="1"/>
            <segment start="smpte=00:01:21:27" end="smpte=00:01:28:02"
priority="2"/>
            <segment start="smpte=00:01:28:03" end="smpte=00:01:35:17"
priority="2"/>
            <segment start="smpte=00:01:35:18" end="smpte=00:01:43:21"
```

FIG. 44

```
" priority="2"/>
    <segment start="smpte=00:01:43:22" end="smpte=00:02:00:02"
priority="2"/>
    <segment start="smpte=00:02:00:03" end="smpte=00:02:21:05"
priority="2"/>
    <segment start="smpte=00:02:21:06" end="smpte=00:02:29:06"
priority="2"/>
    <segment start="smpte=00:02:29:07" end="smpte=00:02:45:27"
priority="2"/>
    <segment start="smpte=00:02:45:28" end="smpte=00:02:49:20"
priority="2"/>
</section>
<section priority="3">
    <segment start="smpte=00:02:49:21" end="smpte=00:02:58:26"
priority="3"/>
    <segment start="smpte=00:02:58:27" end="smpte=00:03:02:25"
priority="3"/>
</section>
<section priority="4">
    <segment start="smpte=00:03:02:26" end="smpte=00:03:04:27"
priority="4"/>
</section>
<section priority="5">
    <segment start="smpte=00:03:04:28" end="smpte=00:03:30:11"
priority="5"/>
</section>
<section priority="4">
    <segment start="smpte=00:03:30:12" end="smpte=00:03:33:27"
priority="4"/>
</section>
<section priority="3">
    <segment start="smpte=00:03:33:28" end="smpte=00:03:39:01"
priority="3"/>
    <segment start="smpte=00:03:39:02" end="smpte=00:03:54:21"
priority="3"/>
</section>
<section priority="4">
    <segment start="smpte=00:03:54:22" end="smpte=00:04:23:17"
priority="4"/>
</section>
<section priority="3">
    <segment start="smpte=00:04:23:18" end="smpte=00:05:10:17"
priority="3"/>
</section>
<section priority="1">
```

FIG. 45

```
<segment start="smpte=00:05:10:18" end="smpte=00:05:23:29"
priority="1"/>
</section>
</section>
</mediaobject>
</contents>
```

FIG. 46

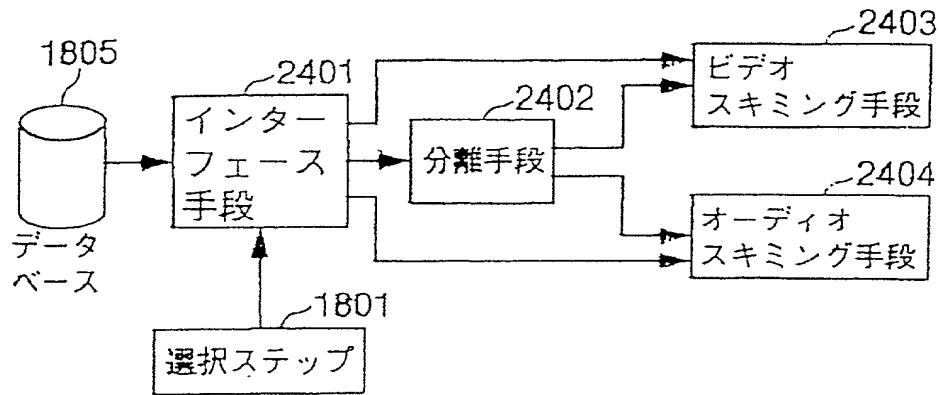
id="mobj-01"	start="smpte=00:01:00:29"	end="smpte=00:01:14:14"
id="mobj-01"	start="smpte=00:04:20:02"	end="smpte=00:05:02:06"
id="mobj-01"	start="smpte=00:05:04:17"	end="smpte=00:06:41:04"
id="mobj-02"	start="smpte=00:00:00:00"	end="smpte=00:00:42:24"
id="mobj-02"	start="smpte=00:03:02:26"	end="smpte=00:03:33:27"
id="mobj-02"	start="smpte=00:03:54:22"	end="smpte=00:04:23:17"

FIG. 49

id="mobj-01"	start="smpte=00:01:00:29"	end="smpte=00:01:14:14"
	start="smpte=00:04:20:02"	end="smpte=00:05:02:06"
	start="smpte=00:05:04:17"	end="smpte=00:06:41:04"
id="mobj-02"	start="smpte=00:00:00:00"	end="smpte=00:00:42:24"
	start="smpte=00:03:02:26"	end="smpte=00:03:33:27"
	start="smpte=00:03:54:22"	end="smpte=00:04:23:17"

【図47】

Fig. 47



[FIG. 47]

1805 DATABASE

2401 INTERFACE MEANS.

1801 THE SELECTION STEP
DEMULTIPLEX

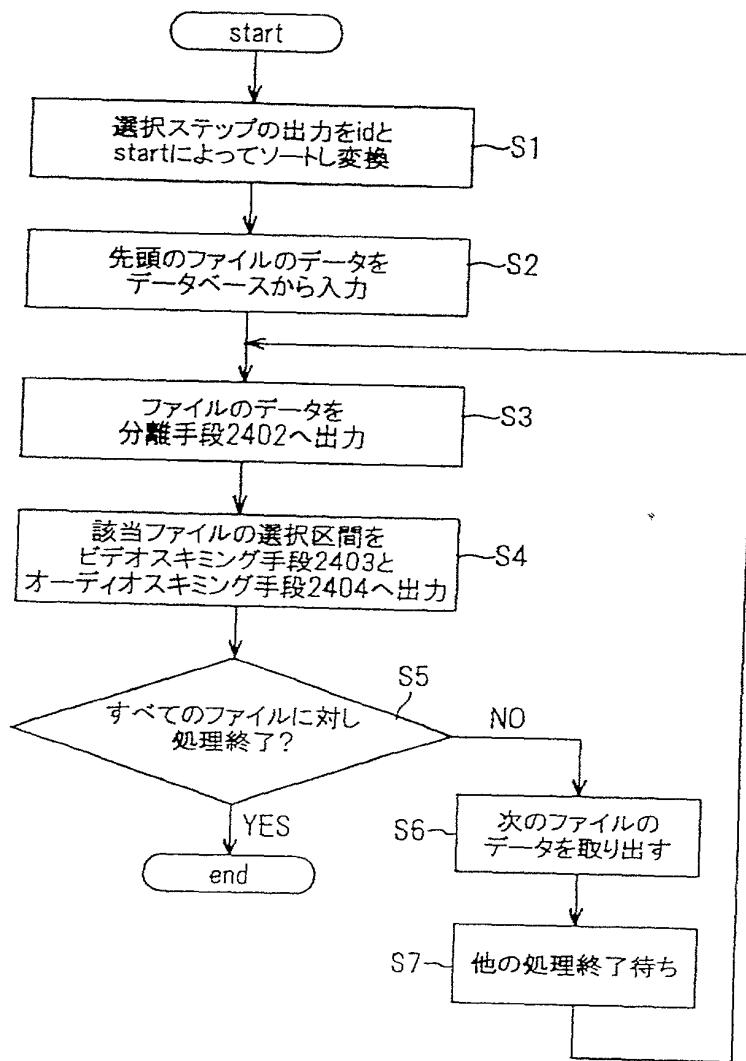
2402 SEPARATION MEANS

2403 VIDEO SKIMMING MEANS

2404 AUDIO SKIMMING MEANS

【図48】

Fig. 48



[FIG. 48]

S1 CONVERT OUTPUT FROM THE SELECTION STEP BY MEANS OF ID AND "start"

S2 INPUT DATA PERTAINING TO HEADER FILE FROM DATABASE

S3 OUTPUT DATA OF FILE TO ~~DEMULTIPLEX~~ SEPARATION MEANS 2402S4 OUTPUT SELECTION SEGMENT OF CORRESPONDING FILE TO VIDEO SKIMMING MEANS 2403
AND AUDIO SKIMMING MEANS 2404

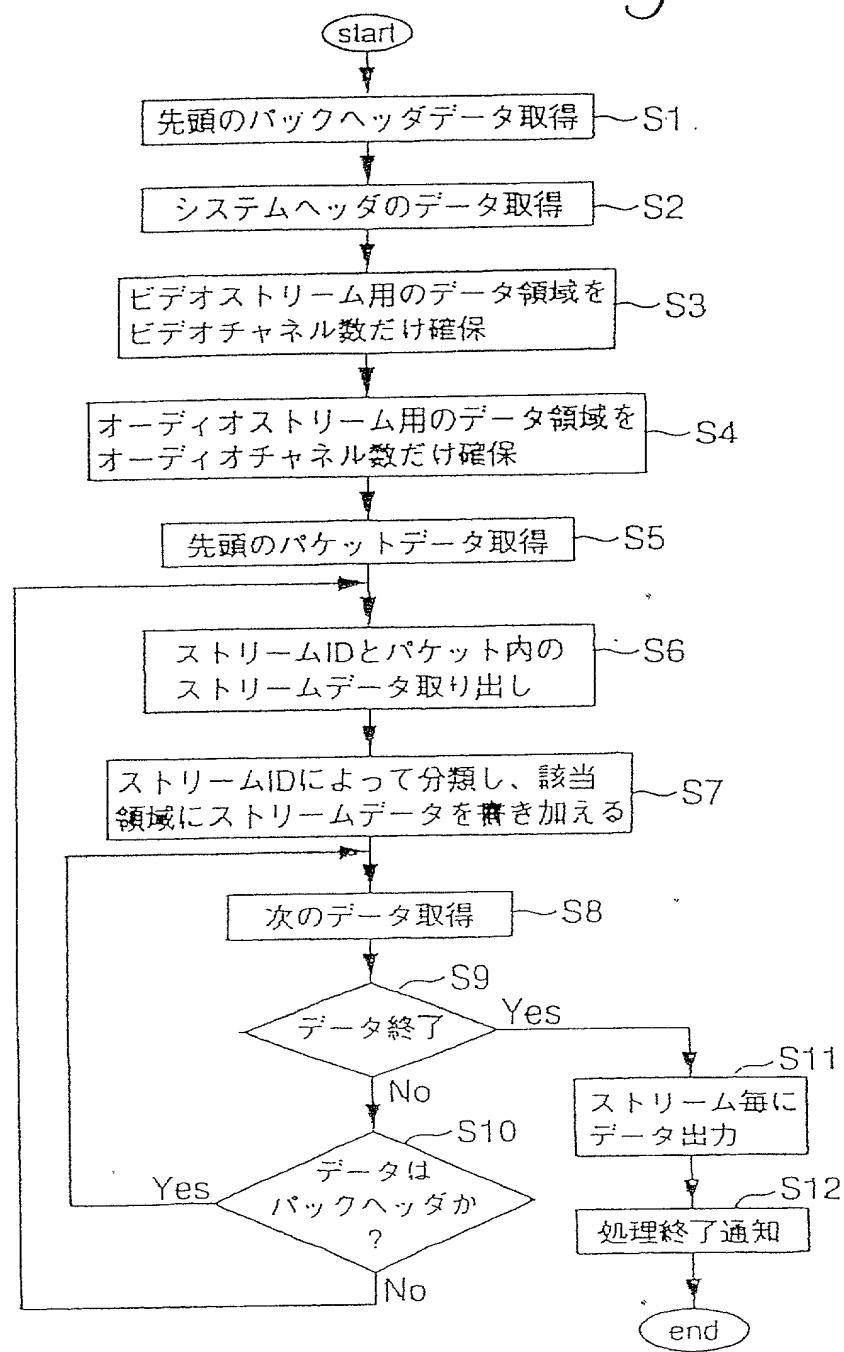
S5 HAVE ALL FILES BEEN SUBJECT TO PROCESSING?

S6 ACQUIRE DATA FROM NEXT FILE

S7 AWAIT COMPLETION OF ANOTHER PROCESSING

[図50]

Fig. 50

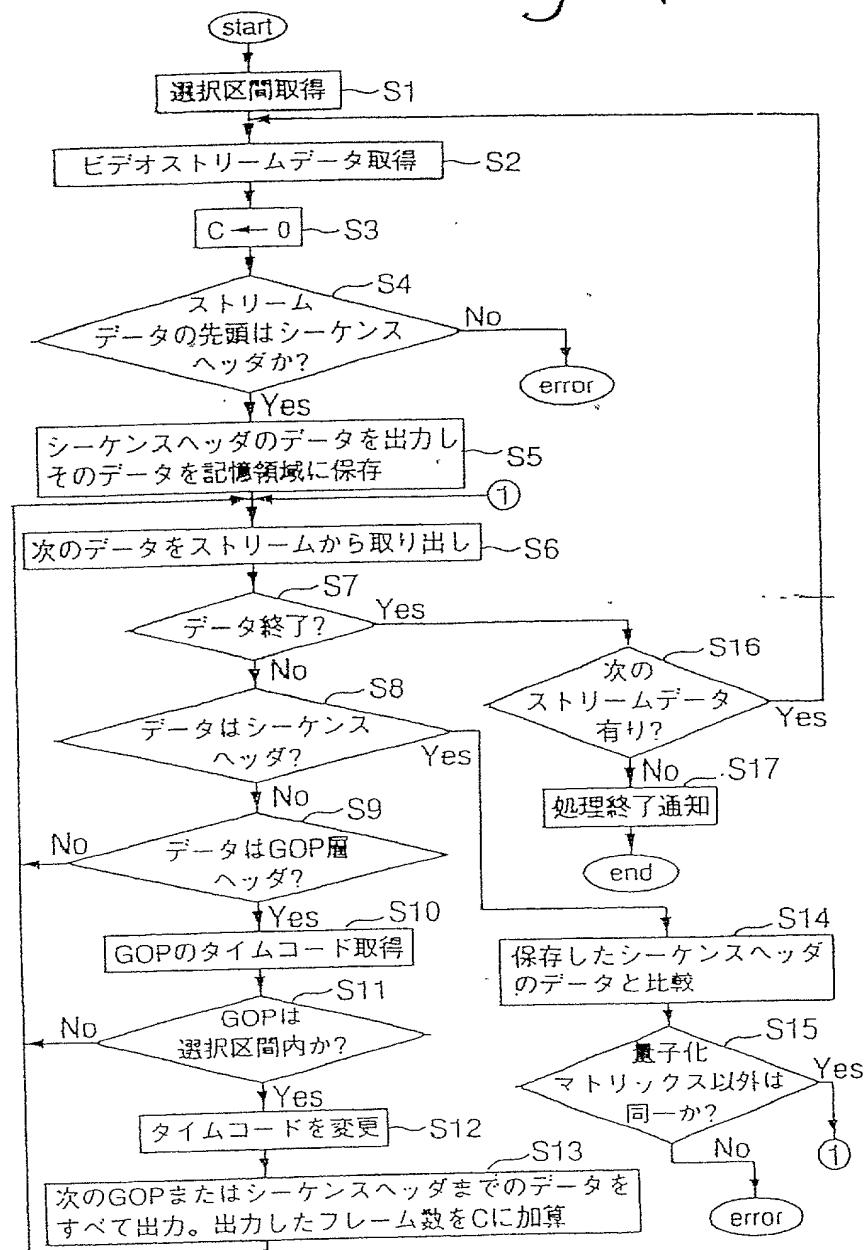


[FIG. 50]

- S1 ACQUIRE HEADER DATA FROM HEAD PACK
- S2 ACQUIRE DATA FROM SYSTEM HEADER
- S3 ENSURE DATA LOCATIONS FOR STORING VIDEO STREAM WHICH IS EQUAL IN NUMBER TO VIDEO CHANNELS
- S4 ENSURE DATA LOCATIONS FOR STORING AUDIO STREAM WHICH IS EQUAL IN NUMBER TO AUDIO CHANNELS
- S5 ACQUIRE DATA FROM HEADER PACKET
- S6 ACQUIRE STREAM ID AND STREAM DATA WITHIN PACKET
- S7 CLASSIFY STREAM DATA ACCORDING TO STREAM ID, AND REWRITE STREAM DATA INTO CORRESPONDING LOCATION
- S8 ACQUIRE NEXT DATA
- S9 END OF DATA
- S10 DO DATA CORRESPOND TO PACK HEADER
- S11 OUTPUT DATA FOR EACH STREAM
- S12 REPORT COMPLETION OF PROCESSING

[図51]

Fig. 51



[FIG. 51]

S1 ACQUIRE SELECTION SEGMENT

S2 ACQUIRE VIDEO STREAM DATA

S4 DOES HEAD OF STREAM DATA CORRESPOND TO SEQUENCE HEADER?

S5 OUTPUT DATA PERTAINING TO SEQUENCE HEADER, AND RESERVE THE DATA INTO MEMORY LOCATION

S6 ACQUIRE NEXT DATA FROM STREAM

S7 END OF DATA?

S8 DO DATA CORRESPOND TO SEQUENCE HEADER?

S9 DO DATA CORRESPOND TO HEADER OF GOP LAYER?

S10 ACQUIRE TIME CODE OF GOP

S11 IS GOP LOCATED WITHIN SELECTION SEGMENT?

S12 CHANGE TIME CODE

S13 OUTPUT ALL DATA UP TO NEXT GOP OR SEQUENCE HEADER, ADD NUMBER OF OUTPUT FRAMES TO COUNTER

S14 COMPARE RESERVED SEQUENCE HEADER WITH DATA

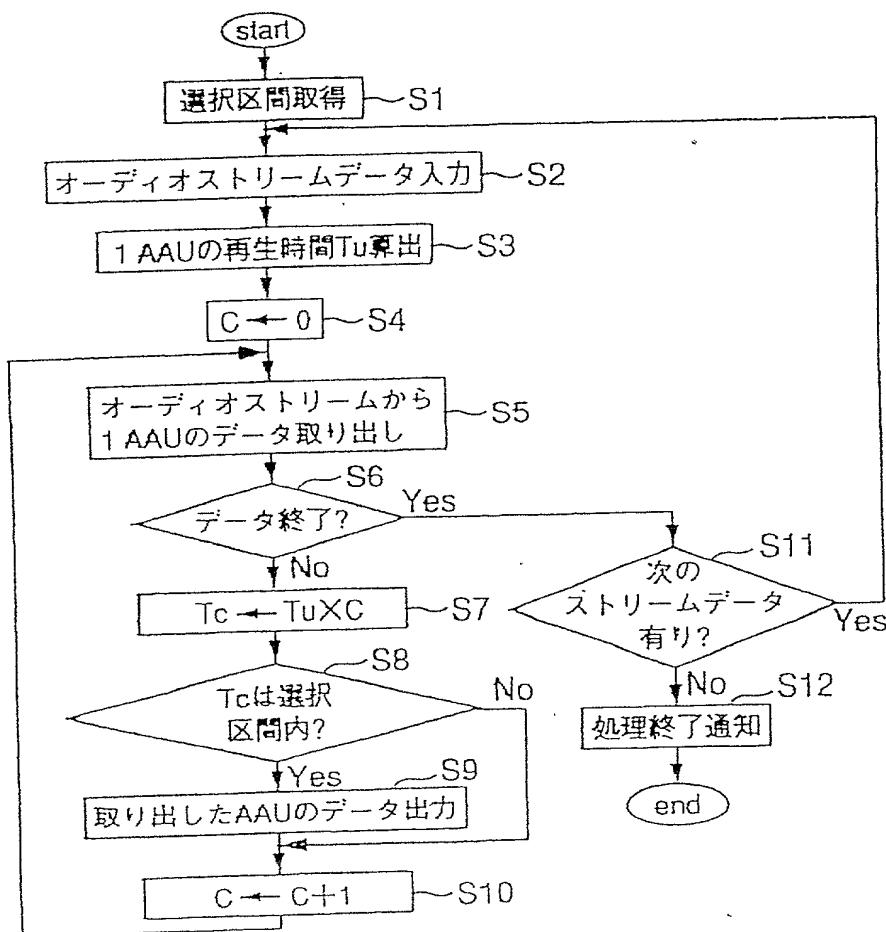
S15 ARE DATA IDENTICAL WITH SEQUENCE HEADER, EXCEPT FOR QUANTIZATION MATRIX?

S16 ARE THERE NEXT STREAM DATA?

S17 REPORT COMPLETION OF PROCESSING

[図52]

Fig. 52



[FIG. 52]

S1 ACQUIRE SELECTION SEGMENT

S2 INPUT AUDIO STREAM DATA

S3 CALCULATE TIME Tu REQUIRED FOR PLAYING BACK SINGLE AAU

S5 ACQUIRE DATA PERTAINING SINGLE AAU FROM AUDIO STREAM

S6 END OF DATA?

S8 IS Tc LOCATED WITHIN SELECTION SEGMENT?

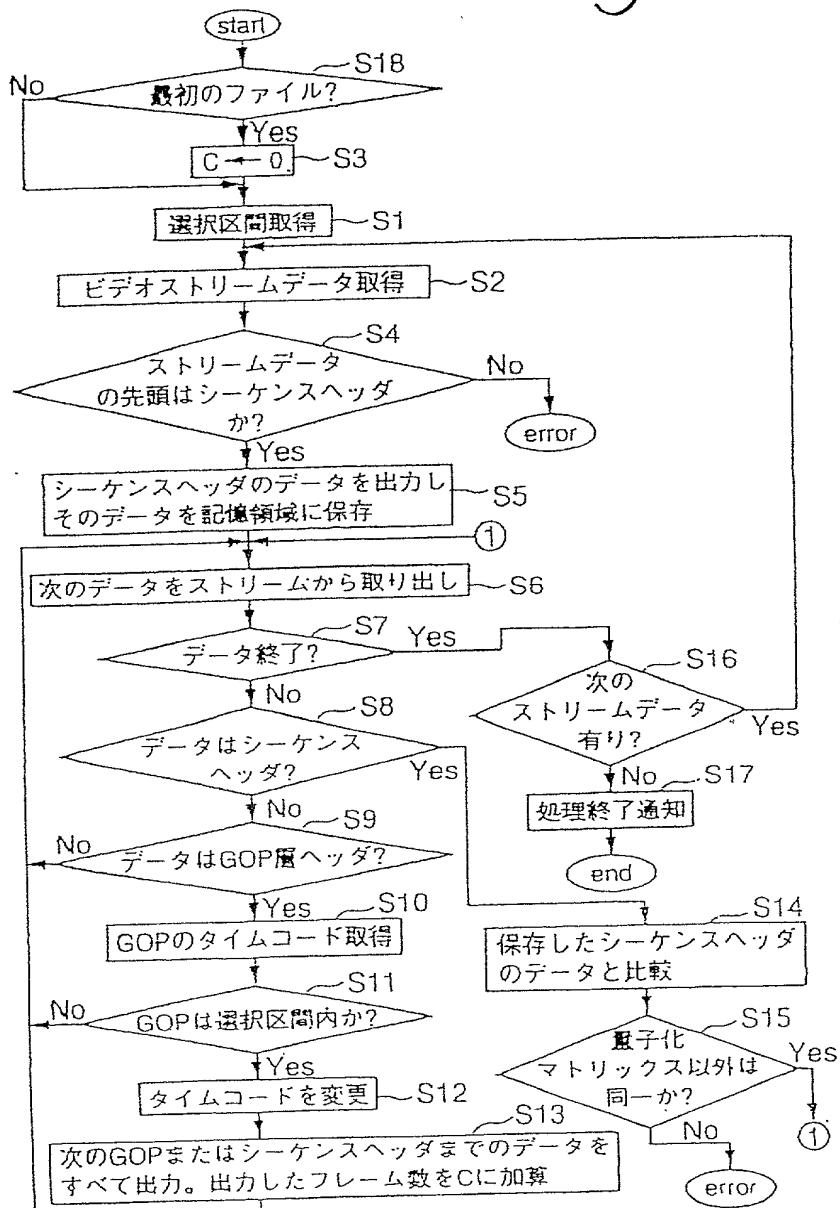
S9 OUTPUT DATA PERTAINING TO ACQUIRED AAU

S11 ARE THERE NEXT STREAM DATA?

S12 REPORT COMPLETION OF PROCESSING

[図53]

Fig. 53



[FIG 53]

S1 ACQUIRE SELECTION SEGMENT

S2 ACQUIRE VIDEO STREAM DATA

S4 DOES HEAD OF STREAM DATA CORRESPOND TO SEQUENCE HEADER?

S5 OUTPUT DATA PERTAINING TO SEQUENCE HEADER, AND RESERVE THE DATA INTO MEMORY

LOCATION

S6 ACQUIRE NEXT DATA FROM STREAM

S7 END OF DATA?

S8 DO DATA CORRESPOND TO SEQUENCE HEADER?

S9 DO DATA CORRESPOND TO HEADER OF GOP LAYER?

S10 ACQUIRE TIME CODE OF GOP

S11 IS GOP LOCATED WITHIN SELECTION SEGMENT?

S12 CHANGE TIME CODE

S13 OUTPUT ALL DATA UP TO NEXT GOP OR SEQUENCE HEADER, ADD NUMBER OF OUTPUT FRAMES TO COUNTER

S14 COMPARE RESERVED SEQUENCE HEADER AND DATA

S15 ARE DATA IDENTICAL WITH SEQUENCE HEADER, EXCEPT FOR QUANTIZATION MATRIX?

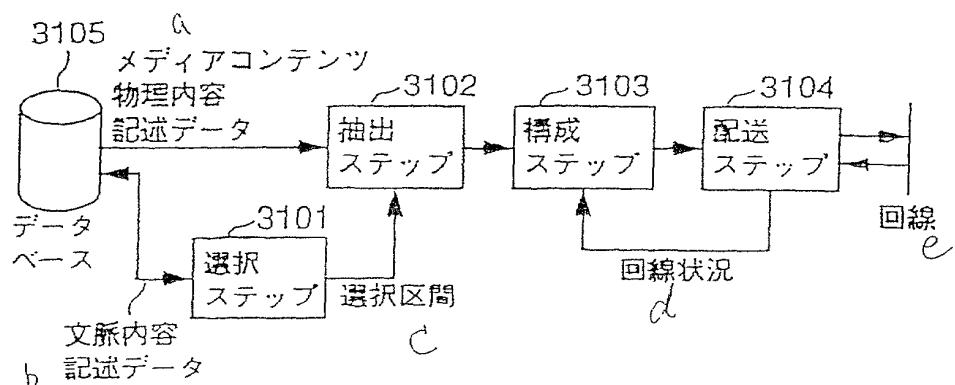
S16 ARE THERE NEXT STREAM DATA?

S17 REPORT COMPLETION OF PROCESSING

S18 DOES THE FILE CORRESPOND TO FIRST FILE?

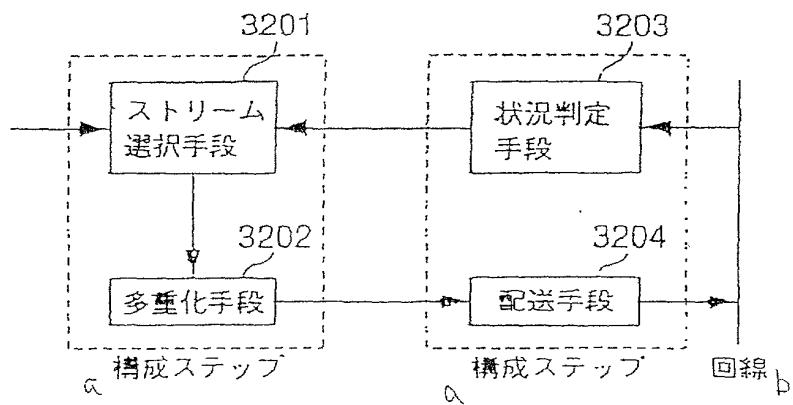
【図54】

Fig. 54



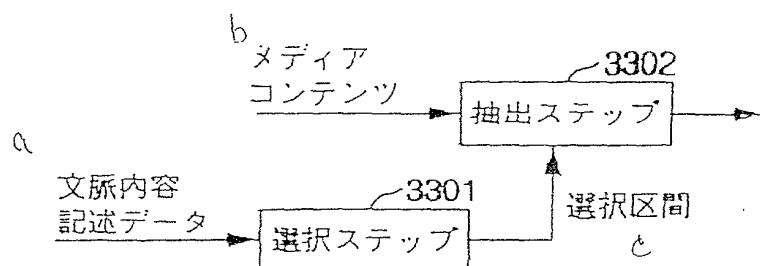
【図55】

Fig. 55



【図56】

Fig. 56



[FIG. 54]

3105 DATABASE
 a MEDIA CONTENT, PHYSICAL DESCRIPTION DATA
 b CONTEXT DESCRIPTION DATA
 c THE SELECTION STEP
 SELECTION SEGMENT
 d THE EXTRACTION STEP
 3103 THE FORMATION STEP
 3104 THE DELIVERY STEP
 e TRAFFIC VOLUME OF LINE
 LINE

[FIG. 55]

3201 STREAM SELECTION MEANS
 3202 MULTIPLEX MEANS
 a THE FORMATION STEP
 3203 TRAFFIC VOLUME DETERMINATION MEANS
 3204 DELIVERY MEANS
 g THE FORMATION STEP
 b LINE

[FIG. 56]

g CONTEXT DESCRIPTION DATA
 b MEDIA CONTENT
 3301 THE SELECTION STEP
 3302 THE EXTRACTION STEP
 c SELECTION SEGMENT

【図 57】

Fig. 57

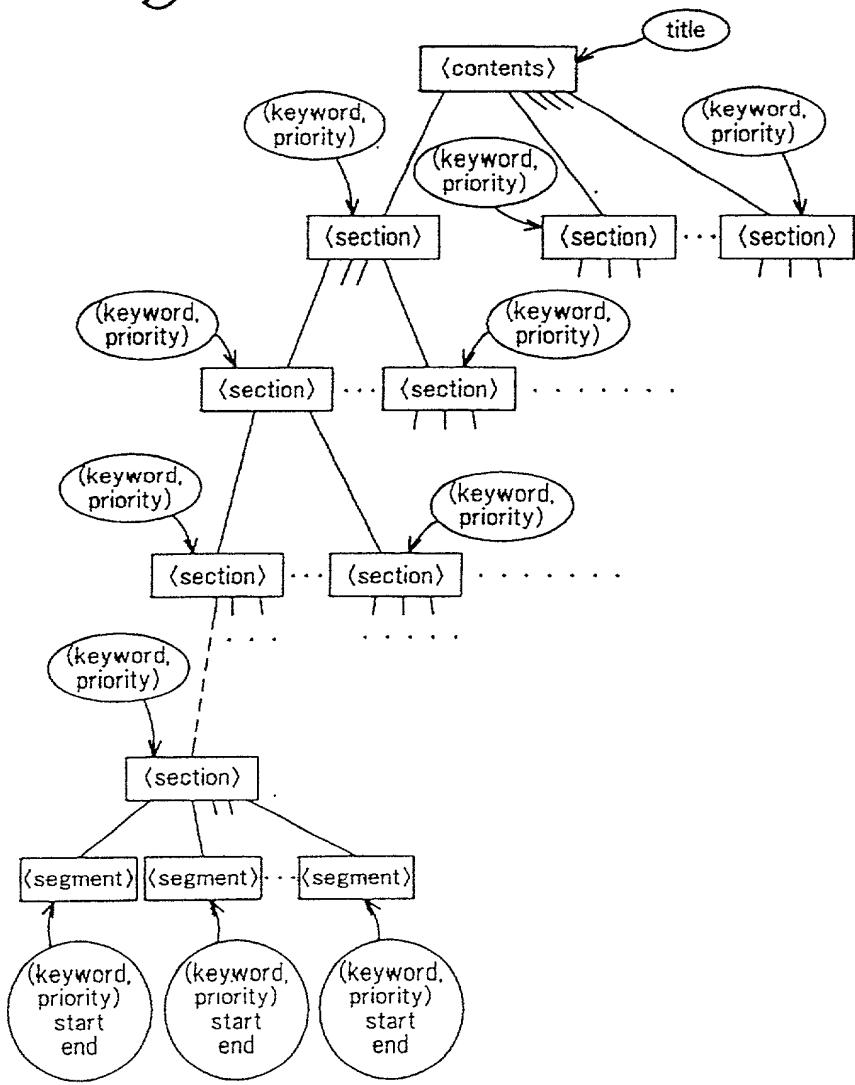


FIG. 58

ONE EXAMPLE OF DTD TO BE USED FOR DESCRIBING CONTEXT DESCRIPTION DATA IN XML

```
<?xml version="1.0"?>

<!ELEMENT contents      (section+)>
<!ATTLIST  contents    contents-id  CDATA      #REQUIRED
              title      CDATA      #REQUIRED
              runtime    NMTOKEN   #REQUIRED>
<!ELEMENT section       (pointofview*, (section+|segment+))>
<!ATTLIST  section     caption     CDATA      #IMPLIED>
<!ELEMENT segment       (pointofview*)>
<!ATTLIST  segment     start      CDATA      #REQUIRED
              end       CDATA      #REQUIRED>
<!ELEMENT pointofview  EMPTY>
<!ATTLIST  pointofview keyword   CDATA      #REQUIRED
              priority  NMTOKEN   #REQUIRED>
```

ONE EXAMPLE OF XML DOCUMENT RELATING TO CONTEXT DESCRIPTION DATA PREPARED BY DTD

```
<?xml version="1.0" encoding="euc-jp"?>
<!DOCTYPE contents SYSTEM "http://mserv.trl.mei.co.jp/SMML/program02.dtd">

<contents contents-id="urn:upi:mei:12345" title="GRAND SUMO TOUR NAMENT" runtime="11:42">
  <section caption="SUMO WRESTLER 0 VS. SUMO WRESTLER 1">
    <pointofview keyword="SUMO WRESTLER 0" priority="5"/>
    <pointofview keyword="SUMO WRESTLER 1" priority="5"/>
    <section>
      <pointofview keyword="SUMO WRESTLER 4" priority="1"/>
      <segment start="smpte=00:00:00:00" end="smpte=00:00:04:17">
        </segment>
    </section>
    <section>
      <segment start="smpte=00:00:04:18" end="smpte=00:00:09:08">
        </segment>
    </section>
    <section>
      <pointofview keyword="SUMO WRESTLER 0" priority="4"/>
      <segment start="smpte=00:00:09:09" end="smpte=00:00:14:13">
```

FIG. 59

```
    </segment>
  </section>
<section>
  <pointofview keyword="SUMO WRESTLER0" priority="3"/>
  <pointofview keyword="SUMO WRESTLER1" priority="3"/>
  <segment start="smpte=00:00:14:14" end="smpte=00:00:19:19">
    <pointofview keyword="SUMO WRESTLER0" priority="3"/>
    <pointofview keyword="SUMO WRESTLER1" priority="3"/>
  </segment>
  <segment start="smpte=00:00:19:20" end="smpte=00:00:22:19">
    <pointofview keyword="SUMO WRESTLER0" priority="1"/>
  </segment>
  <segment start="smpte=00:00:22:20" end="smpte=00:00:28:10">
    <pointofview keyword="SUMO WRESTLER0" priority="3"/>
    <pointofview keyword="SUMO WRESTLER1" priority="3"/>
  </segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER0" priority="3"/>
  <pointofview keyword="SUMO WRESTLER4" priority="2"/>
  <segment start="smpte=00:00:28:11" end="smpte=00:00:30:28">
    <pointofview keyword="SUMO WRESTLER0" priority="3"/>
    <pointofview keyword="SUMO WRESTLER4" priority="2"/>
  </segment>
  <segment start="smpte=00:00:30:29" end="smpte=00:00:43:11">
    <pointofview keyword="SUMO WRESTLER0" priority="3"/>
    <pointofview keyword="SUMO WRESTLER4" priority="1"/>
  </segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER0" priority="3"/>
  <pointofview keyword="SUMO WRESTLER1" priority="3"/>
  <segment start="smpte=00:00:43:12" end="smpte=00:00:46:20">
    <pointofview keyword="SUMO WRESTLER0" priority="3"/>
    <pointofview keyword="SUMO WRESTLER1" priority="3"/>
  </segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER0" priority="4"/>
  <segment start="smpte=00:00:46:21" end="smpte=00:00:57:09">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
  </segment>
</section>
```

FIG. 60

```
<section>
  <pointofview keyword="SUMO WRESTLER0" priority="3"/>
  <pointofview keyword="SUMO WRESTLER1" priority="3"/>
  <segment start="smpte=00:00:57:10" end="smpte=00:01:00:28">
    </segment>
</section>
<section>
  <pointofview keyword="SUMO NAME" priority="4"/>
  <pointofview keyword="SUMO WRESTLER0" priority="5"/>
  <pointofview keyword="SUMO WRESTLER1" priority="5"/>
  <segment start="smpte=00:01:00:29" end="smpte=00:01:14:14">
    </segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER0" priority="2"/>
  <pointofview keyword="SUMO WRESTLER1" priority="2"/>
  <segment start="smpte=00:01:14:15" end="smpte=00:01:24:20">
    </segment>
</section>
<section>
  <pointofview keyword="WIN-LOSS RECORD" priority="3"/>
  <pointofview keyword="SUMO WRESTLER0" priority="4"/>
  <pointofview keyword="SUMO WRESTLER1" priority="4"/>
  <segment start="smpte=00:01:24:21" end="smpte=00:01:39:26">
    </segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER0" priority="4"/>
  <pointofview keyword="SUMO WRESTLER1" priority="4"/>
  <segment start="smpte=00:01:39:27" end="smpte=00:01:52:09">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
    <pointofview keyword="SUMO WRESTLER1" priority="1"/>
  </segment>
  <segment start="smpte=00:01:52:10" end="smpte=00:02:02:16">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
  </segment>
  <segment start="smpte=00:02:02:17" end="smpte=00:02:31:09">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
    <pointofview keyword="SUMO WRESTLER1" priority="4"/>
  </segment>
  <segment start="smpte=00:02:31:10" end="smpte=00:02:47:18">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
  </segment>
```

FIG. 61

```
    </segment>
  </section>
  <section>
    <pointofview keyword="SUMO WRESTLER2" priority="2"/>
    <segment start="smpte=00:02:47:19" end="smpte=00:02:59:03">
      </segment>
    </section>
    <section>
      <pointofview keyword="SUMO WRESTLER5" priority="2"/>
      <segment start="smpte=00:02:59:04" end="smpte=00:03:07:14">
        </segment>
    </section>
    <section>
      <pointofview keyword="SUMO WRESTLER0" priority="3"/>
      <pointofview keyword="SUMO WRESTLER1" priority="3"/>
      <segment start="smpte=00:03:07:15" end="smpte=00:03:13:28">
        <pointofview keyword="SUMO WRESTLER0" priority="3"/>
        <pointofview keyword="SUMO WRESTLER1" priority="3"/>
      </segment>
      <segment start="smpte=00:03:13:29" end="smpte=00:03:21:28">
        <pointofview keyword="SUMO WRESTLER0" priority="4"/>
      </segment>
      <segment start="smpte=00:03:21:29" end="smpte=00:03:33:15">
        <pointofview keyword="SUMO WRESTLER1" priority="4"/>
      </segment>
      <segment start="smpte=00:03:33:16" end="smpte=00:03:47:00">
        <pointofview keyword="SUMO WRESTLER0" priority="4"/>
        <pointofview keyword="SUMO WRESTLER1" priority="4"/>
      </segment>
      <segment start="smpte=00:03:47:01" end="smpte=00:03:58:14">
        <pointofview keyword="SUMO WRESTLER0" priority="4"/>
      </segment>
      <segment start="smpte=00:03:58:15" end="smpte=00:04:12:27">
        <pointofview keyword="SUMO WRESTLER1" priority="4"/>
      </segment>
    </section>
    <section>
      <pointofview keyword="SUMO WRESTLER0" priority="5"/>
      <pointofview keyword="SUMO WRESTLER1" priority="5"/>
      <segment start="smpte=00:04:12:28" end="smpte=00:04:20:01">
        <pointofview keyword="SUMO WRESTLER0" priority="4"/>
        <pointofview keyword="SUMO WRESTLER1" priority="4"/>
      </segment>
    </section>
```

FIG. 62

```
</segment>
<segment start="smpte=00:04:20:02" end="smpte=00:04:31:05">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
</segment>
<segment start="smpte=00:04:31:06" end="smpte=00:04:34:28">
    <pointofview keyword="SUMO WRESTLER1" priority="4"/>
</segment>
<segment start="smpte=00:04:34:29" end="smpte=00:04:37:06">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
</segment>
<segment start="smpte=00:04:37:07" end="smpte=00:04:57:05">
    <pointofview keyword="SUMO WRESTLER0" priority="5"/>
    <pointofview keyword="SUMO WRESTLER1" priority="5"/>
</segment>
<segment start="smpte=00:04:57:06" end="smpte=00:05:00:02">
    <pointofview keyword="SUMO WRESTLER0" priority="5"/>
</segment>
<segment start="smpte=00:05:00:03" end="smpte=00:05:02:06">
    <pointofview keyword="SUMO WRESTLER0" priority="5"/>
    <pointofview keyword="SUMO WRESTLER1" priority="5"/>
</segment>
</section>
<section>
    <segment start="smpte=00:05:02:07" end="smpte=00:05:04:16">
        </segment>
</section>
<section>
    <pointofview keyword="SUMO WRESTLER0" priority="5"/>
    <segment start="smpte=00:05:04:17" end="smpte=00:05:13:25">
        <pointofview keyword="SUMO WRESTLER0" priority="5"/>
    </segment>
    <segment start="smpte=00:05:13:26" end="smpte=00:05:17:01">
        <pointofview keyword="SUMO WRESTLER0" priority="5"/>
    </segment>
    <segment start="smpte=00:05:17:02" end="smpte=00:05:23:21">
        <pointofview keyword="SUMO WRESTLER0" priority="4"/>
    </segment>
</section>
<section>
    <pointofview keyword="VIDEO" priority="4"/>
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
    <pointofview keyword="SUMO WRESTLER1" priority="4"/>
    <segment start="smpte=00:05:23:22" end="smpte=00:05:44:15">
```

FIG. 63

```
<pointofview keyword="VIDEO" priority="4"/>
<pointofview keyword="SUMO WRESTLER0" priority="5"/>
<pointofview keyword="SUMO WRESTLER1" priority="4"/>
</segment>
<segment start="smpte=00:05:44:16" end="smpte=00:05:50:27">
<pointofview keyword="VIDEO" priority="4"/>
<pointofview keyword="SUMO WRESTLER0" priority="5"/>
<pointofview keyword="SUMO WRESTLER1" priority="4"/>
</segment>
<segment start="smpte=00:05:50:28" end="smpte=00:06:08:15">
<pointofview keyword="VIDEO" priority="4"/>
<pointofview keyword="SUMO WRESTLER0" priority="4"/>
<pointofview keyword="SUMO WRESTLER1" priority="4"/>
</segment>
<segment start="smpte=00:06:08:16" end="smpte=00:06:18:05">
<pointofview keyword="VIDEO" priority="4"/>
<pointofview keyword="SUMO WRESTLER0" priority="4"/>
<pointofview keyword="SUMO WRESTLER1" priority="4"/>
</segment>
</section>
<section>
<pointofview keyword="SUMO WRESTLER0" priority="4"/>
<segment start="smpte=00:06:18:06" end="smpte=00:06:24:04">
</segment>
<segment start="smpte=00:06:24:05" end="smpte=00:06:41:04">
</segment>
</section>
</section>
<section caption="SUMO WRESTLER2 VS. SUMO WRESTLER3">
<pointofview keyword="SUMO WRESTLER2" priority="5"/>
<pointofview keyword="SUMO WRESTLER3" priority="5"/>
<section>
<pointofview keyword="SUMO NAME" priority="4"/>
<pointofview keyword="SUMO WRESTLER2" priority="5"/>
<pointofview keyword="SUMO WRESTLER3" priority="5"/>
<segment start="smpte=00:06:18:05" end="smpte=00:07:00:24">
</segment>
</section>
<section>
<pointofview keyword="WIN-LOSS RECORD" priority="3"/>
<pointofview keyword="SUMO WRESTLER2" priority="4"/>
<pointofview keyword="SUMO WRESTLER3" priority="4"/>
```

FIG. 64

```
<segment start="smpte=00:07:00:25" end="smpte=00:07:15:21">
  </segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER0" priority="2"/>
  <segment start="smpte=00:07:15:22" end="smpte=00:07:39:26">
    </segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER2" priority="4"/>
  <segment start="smpte=00:07:39:27" end="smpte=00:07:46:02">
    </segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER2" priority="4"/>
  <pointofview keyword="SUMO WRESTLER3" priority="4"/>
  <segment start="smpte=00:07:46:03" end="smpte=00:07:53:17">
    </segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER3" priority="4"/>
  <segment start="smpte=00:07:53:18" end="smpte=00:08:01:21">
    </segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER2" priority="4"/>
  <pointofview keyword="SUMO WRESTLER3" priority="4"/>
  <segment start="smpte=00:08:01:22" end="smpte=00:08:18:02">
    <pointofview keyword="SUMO WRESTLER2" priority="4"/>
    <pointofview keyword="SUMO WRESTLER3" priority="4"/>
  </segment>
  <segment start="smpte=00:08:18:03" end="smpte=00:08:39:05">
    <pointofview keyword="SUMO WRESTLER2" priority="4"/>
  </segment>
  <segment start="smpte=00:08:39:06" end="smpte=00:08:47:06">
    <pointofview keyword="SUMO WRESTLER2" priority="4"/>
    <pointofview keyword="SUMO WRESTLER3" priority="4"/>
  </segment>
  <segment start="smpte=00:08:47:07" end="smpte=00:09:03:27">
    <pointofview keyword="SUMO WRESTLER2" priority="4"/>
  </segment>
  <segment start="smpte=00:09:03:28" end="smpte=00:09:07:20">
    <pointofview keyword="SUMO WRESTLER3" priority="4"/>
  </segment>
```

FIG. 65

```
</segment>
<segment start="smpte=00:09:07:21" end="smpte=00:09:16:26">
    <pointofview keyword="SUMO WRESTLER2" priority="4"/>
    <pointofview keyword="SUMO WRESTLER3" priority="4"/>
</segment>
<segment start="smpte=00:09:16:27" end="smpte=00:09:20:25">
    <pointofview keyword="SUMO WRESTLER2" priority="4"/>
</segment>
<segment start="smpte=00:09:20:26" end="smpte=00:09:22:27">
    <pointofview keyword="SUMO WRESTLER3" priority="4"/>
</segment>
</section>
<section>
    <pointofview keyword="SUMO WRESTLER2" priority="5"/>
    <pointofview keyword="SUMO WRESTLER3" priority="5"/>
    <segment start="smpte=00:09:22:28" end="smpte=00:09:48:11">
        <pointofview keyword="SUMO WRESTLER2" priority="5"/>
        <pointofview keyword="SUMO WRESTLER3" priority="5"/>
    </segment>
    <segment start="smpte=00:09:48:12" end="smpte=00:09:51:27">
        <pointofview keyword="SUMO WRESTLER2" priority="5"/>
    </segment>
    <segment start="smpte=00:09:51:28" end="smpte=00:09:57:01">
        <pointofview keyword="SUMO WRESTLER2" priority="4"/>
        <pointofview keyword="SUMO WRESTLER3" priority="4"/>
    </segment>
    <segment start="smpte=00:09:57:02" end="smpte=00:10:12:21">
        <pointofview keyword="SUMO WRESTLER2" priority="4"/>
    </segment>
</section>
<section>
    <pointofview keyword="VIDEO" priority="4"/>
    <pointofview keyword="SUMO WRESTLER2" priority="4"/>
    <pointofview keyword="SUMO WRESTLER3" priority="4"/>
    <segment start="smpte=00:10:12:22" end="smpte=00:10:41:17">
        <pointofview keyword="VIDEO" priority="4"/>
        <pointofview keyword="SUMO WRESTLER2" priority="4"/>
        <pointofview keyword="SUMO WRESTLER3" priority="4"/>
    </segment>
</section>
<section>
    <pointofview keyword="SUMO WRESTLER2" priority="5"/>
```

FIG. 66

```
<segment start="smpte=00:10:41:18" end="smpte=00:11:28:17">
  </segment>
</section>
<section>
  <segment start="smpte=00:11:28:18" end="smpte=00:11:41:29">
    </segment>
  </section>
</section>
</contents>
```

FIG. 67

ONE EXAMPLE OF DTD TO BE USED FOR DESCRIBING CONTEXT DESCRIPTION DATA IN XML

```
<?xml version="1.0"?>

<!ELEMENT contents      (section+)>
<!ATTLIST  contents    contents-id  CDATA      #REQUIRED
              title      CDATA      #REQUIRED
              runtime    NMTOKEN   #REQUIRED>
<!ELEMENT section       (pointofview*,(section+|segment+))>
<!ATTLIST  section     caption     CDATA      #IMPLIED>
<!ELEMENT segment       (pointofview*,dominant-data)>
<!ATTLIST  segment     start      CDATA      #REQUIRED
              end       CDATA      #REQUIRED>
<!ELEMENT pointofview  EMPTY>
<!ATTLIST  pointofview keyword    CDATA      #REQUIRED
              priority   NMTOKEN   #REQUIRED>
<!ELEMENT dominant-data EMPTY>
<!ATTLIST  dominant-data frame-no  NMTOKEN   #IMPLIED
              start      CDATA      #IMPLIED
              end       CDATA      #IMPLIED
              locator    CDATA      #IMPLIED>
```

ONE EXAMPLE OF XML DOCUMENT RELATING TO CONTEXT DESCRIPTION DATA PREPARED BY DTD

```
<?xml version="1.0" encoding="euc-jp"?>
<!DOCTYPE contents SYSTEM "http://mserv.trl.mei.co.jp/SMML/program04.dtd">

<contents  contents-id="urn:upi:nhk:12345"    title="GRAND    SUMO
TOURNAMENT" runtime="11:42">
  <section caption="SUMO WRESTLER0 VS. SUMO WRESTLER1">
    <pointofview keyword="SUMO WRESTLER0" priority="5"/>
    <pointofview keyword="SUMO WRESTLER1" priority="5"/>
    <section>
      <pointofview keyword="SUMO WRESTLER4" priority="1"/>
      <segment start="smpte=00:00:00:00" end="smpte=00:00:04:17">
        <pointofview keyword="SUMO WRESTLER4" priority="1"/>
      <dominant-data
locator="http://mserv.trl.mei.co.jp/DMV/dmp01.gif"/>
      <dominant-data
locator="http://mserv.trl.mei.co.jp/DMA/dma01.mp3"/>
```

FIG. 68

```
    </segment>
  </section>
  <section>
    <segment start="smpte=00:00:04:18" end="smpte=00:00:09:08">
      <dominant-data
        locator="http://mserv.trl.mei.co.jp/DMV/dmp02.gif"/>
      <dominant-data
        locator="http://mserv.trl.mei.co.jp/DMA/dma02.mp3"/>
    </segment>
  </section>
  <section>
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
    <segment start="smpte=00:00:09:09" end="smpte=00:00:14:13">
      <dominant-data
        locator="http://mserv.trl.mei.co.jp/DMV/dmp03.gif"/>
      <dominant-data
        locator="http://mserv.trl.mei.co.jp/DMA/dma03.mp3"/>
    </segment>
  </section>
  <section>
    <pointofview keyword="SUMO WRESTLER0" priority="3"/>
    <pointofview keyword="SUMO WRESTLER1" priority="3"/>
    <segment start="smpte=00:00:14:14" end="smpte=00:00:19:19">
      <pointofview keyword="SUMO WRESTLER0" priority="3"/>
      <pointofview keyword="SUMO WRESTLER1" priority="3"/>
      <dominant-data
        locator="http://mserv.trl.mei.co.jp/DMV/dmp04.gif"/>
      <dominant-data
        locator="http://mserv.trl.mei.co.jp/DMA/dma04.mp3"/>
    </segment>
    <segment start="smpte=00:00:19:20" end="smpte=00:00:22:19">
      <pointofview keyword="SUMO WRESTLER0" priority="1"/>
      <dominant-data
        locator="http://mserv.trl.mei.co.jp/DMV/dmp05.gif"/>
      <dominant-data
        locator="http://mserv.trl.mei.co.jp/DMA/dma05.mp3"/>
    </segment>
    <segment start="smpte=00:00:22:20" end="smpte=00:00:28:10">
      <pointofview keyword="SUMO WRESTLER0" priority="3"/>
      <pointofview keyword="SUMO WRESTLER1" priority="3"/>
      <dominant-data
        locator="http://mserv.trl.mei.co.jp/DMV/dmp06.gif"/>
      <dominant-data
        locator="http://mserv.trl.mei.co.jp/DMA/dma06.mp3"/>
    </segment>
  </section>

```

FIG. 69

```
</segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER0" priority="3"/>
  <pointofview keyword="SUMO WRESTLER4" priority="2"/>
  <segment start="smpte=00:00:28:11" end="smpte=00:00:30:28">
    <pointofview keyword="SUMO WRESTLER0" priority="3"/>
    <pointofview keyword="SUMO WRESTLER4" priority="2"/>
    <dominant-data
      locator="http://mserv.trl.mei.co.jp/DMV/dmp07.gif"/>
      <dominant-data
        locator="http://mserv.trl.mei.co.jp/DMA/dma07.mp3"/>
        </segment>
        <segment start="smpte=00:00:30:29" end="smpte=00:00:43:11">
          <pointofview keyword="SUMO WRESTLER0" priority="3"/>
          <pointofview keyword="SUMO WRESTLER4" priority="1"/>
          <dominant-data
            start="smpte=00:00:31:20"
            end="smpte=00:00:35:05"/>
          </segment>
        </section>
        <section>
          <pointofview keyword="SUMO WRESTLER0" priority="3"/>
          <pointofview keyword="SUMO WRESTLER1" priority="3"/>
          <segment start="smpte=00:00:43:12" end="smpte=00:00:46:20">
            <pointofview keyword="SUMO WRESTLER0" priority="3"/>
            <pointofview keyword="SUMO WRESTLER1" priority="3"/>
            <dominant-data
              locator="http://mserv.trl.mei.co.jp/DMV/dmp08.gif"/>
              <dominant-data
                locator="http://mserv.trl.mei.co.jp/DMA/dma08.mp3"/>
                </segment>
              </section>
              <section>
                <pointofview keyword="SUMO WRESTLER0" priority="4"/>
                <segment start="smpte=00:00:46:21" end="smpte=00:00:57:09">
                  <pointofview keyword="SUMO WRESTLER0" priority="4"/>
                  <dominant-data
                    start="smpte=00:00:47:00"
                    end="smpte=00:00:50:03"/>
                  </segment>
                </section>
                <section>
                  <pointofview keyword="SUMO WRESTLER0" priority="3"/>
                  <pointofview keyword="SUMO WRESTLER1" priority="3"/>
                  <segment start="smpte=00:00:57:10" end="smpte=00:01:00:28">
                    <pointofview keyword="SUMO WRESTLER0" priority="3"/>
```

FIG. 70

```
<pointofview keyword="SUMO WRESTLER1" priority="3"/>
  <dominant-data
  locator="http://mserv.trl.mei.co.jp/DMV/dmp09.gif"/>
    <dominant-data
  locator="http://mserv.trl.mei.co.jp/DMA/dma09.mp3"/>
    </segment>
  </section>
  <section>
    <pointofview keyword="SUMO NAME" priority="4"/>
    <pointofview keyword="SUMO WRESTLER0" priority="5"/>
    <pointofview keyword="SUMO WRESTLER1" priority="5"/>
    <segment start="smpte=00:01:00:29" end="smpte=00:01:14:14">
      <pointofview keyword="SUMO NAME" priority="4"/>
      <pointofview keyword="SUMO WRESTLER0" priority="5"/>
      <pointofview keyword="SUMO WRESTLER1" priority="5"/>
      <dominant-data
  locator="http://mserv.trl.mei.co.jp/DMV/dmp10.gif"/>
    <dominant-data
  locator="http://mserv.trl.mei.co.jp/DMA/dma10.mp3"/>
    </segment>
  </section>
  <section>
    <pointofview keyword="SUMO WRESTLER0" priority="2"/>
    <pointofview keyword="SUMO WRESTLER1" priority="2"/>
    <segment start="smpte=00:01:14:15" end="smpte=00:01:24:20">
      <dominant-data      start="smpte=00:01:15:20"      end="smpte
=00:01:19:03"/>
    </segment>
  </section>
  <section>
    <pointofview keyword="WIN-LOSS RECORD " priority="3"/>
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
    <pointofview keyword="SUMO WRESTLER1" priority="4"/>
    <segment start="smpte=00:01:24:21" end="smpte=00:01:39:26">
      <pointofview keyword="WIN-LOSS RECORD" priority="3"/>
      <pointofview keyword="SUMO WRESTLER0" priority="4"/>
      <pointofview keyword="SUMO WRESTLER1" priority="4"/>
      <dominant-data
  locator="http://mserv.trl.mei.co.jp/DMV/dmp11.gif"/>
    <dominant-data
  locator="http://mserv.trl.mei.co.jp/DMA/dma11.mp3"/>
    </segment>
  </section>
  <section>
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
```

FIG. 71

```
<pointofview keyword="SUMO WRESTLER1" priority="4"/>
<segment start="smpte=00:01:39:27" end="smpte=00:01:52:09">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
    <pointofview keyword="SUMO WRESTLER1" priority="1"/>
    <dominant-data
locator="http://mserv.trl.mei.co.jp/DMV/dmp12.gif"/>
    <dominant-data
locator="http://mserv.trl.mei.co.jp/DMA/dma12.mp3"/>
</segment>
<segment start="smpte=00:01:52:10" end="smpte=00:02:02:16">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
    <dominant-data      start="smpte=00:01:52:20"      end="smpte
=00:01:55:10"/>
</segment>
<segment start="smpte=00:02:02:17" end="smpte=00:02:31:09">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
    <pointofview keyword="SUMO WRESTLER1" priority="4"/>
    <dominant-data
locator="http://mserv.trl.mei.co.jp/DMV/dmp13.gif"/>
    <dominant-data
locator="http://mserv.trl.mei.co.jp/DMA/dma13.mp3"/>
</segment>
<segment start="smpte=00:02:31:10" end="smpte=00:02:47:18">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
    <dominant-data          start="smpte=00:02:31:20"
end="smpte=00:02:38:11"/>
</segment>
</section>
<section>
    <pointofview keyword="SUMO WRESTLER2" priority="2"/>
    <segment start="smpte=00:02:47:19" end="smpte=00:02:59:03">
        <pointofview keyword="SUMO WRESTLER2" priority="2"/>
        <dominant-data          start="smpte=00:02:47:25"
end="smpte=00:02:48:02"/>
    </segment>
</section>
<section>
    <pointofview keyword="SUMO WRESTLER5" priority="2"/>
    <segment start="smpte=00:02:59:04" end="smpte=00:03:07:14">
        <pointofview keyword="SUMO WRESTLER5" priority="2"/>
        <dominant-data          start="smpte=00:02:59:10"
end="smpte=00:03:02:12"/>
    </segment>
</section>
<section>
```

FIG. 72

```
<pointofview keyword="SUMO WRESTLER0" priority="3"/>
<pointofview keyword="SUMO WRESTLER1" priority="3"/>
<segment start="smpte=00:03:07:15" end="smpte=00:03:13:28">
    <pointofview keyword="SUMO WRESTLER0" priority="3"/>
    <pointofview keyword="SUMO WRESTLER1" priority="3"/>
    <dominant-data    start="smpte=00:03:08:12"    end="smpte=
00:03:10:20"/>
    </segment>
    <segment start="smpte=00:03:13:29" end="smpte=00:03:21:28">
        <pointofview keyword="SUMO WRESTLER0" priority="4"/>
        <dominant-data    start="smpte=00:03:15:10"    end="smpte=
00:03:18:03"/>
        </segment>
        <segment start="smpte=00:03:21:29" end="smpte=00:03:33:15">
            <pointofview keyword="SUMO WRESTLER1" priority="4"/>
            <dominant-data    start="smpte=00:03:22:08"    end="smpte=
00:03:25:02"/>
            </segment>
            <segment start="smpte=00:03:33:16" end="smpte=00:03:47:00">
                <pointofview keyword="SUMO WRESTLER0" priority="4"/>
                <pointofview keyword="SUMO WRESTLER1" priority="4"/>
                <dominant-data    start="smpte=00:03:35:09"    end="smpte=
00:03:38:21"/>
                </segment>
                <segment start="smpte=00:03:47:01" end="smpte=00:03:58:14">
                    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
                    <dominant-data    start="smpte=00:03:48:00"    end="smpte=
00:03:51:17"/>
                    </segment>
                    <segment start="smpte=00:03:58:15" end="smpte=00:04:12:27">
                        <pointofview keyword="SUMO WRESTLER1" priority="4"/>
                        <dominant-data    start="smpte=00:03:59:02"    end="smpte=
00:04:01:07"/>
                    </segment>
                </section>
                <section>
                    <pointofview keyword="SUMO WRESTLER0" priority="5"/>
                    <pointofview keyword="SUMO WRESTLER1" priority="5"/>
                    <segment start="smpte=00:04:12:28" end="smpte=00:04:20:01">
                        <pointofview keyword="SUMO WRESTLER0" priority="4"/>
                        <pointofview keyword="SUMO WRESTLER1" priority="4"/>
                        <dominant-data    locator="http://mserv.trl.mei.co.jp/DMV/dmp14.
gif"/>
                        <dominant-data    locator="http://mserv.trl.mei.co.jp/DMA/dma14.
mp3"/>
```

FIG. 73

```
</segment>
<segment start="smpte=00:04:20:02" end="smpte=00:04:31:05">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
    <dominant-data
locator="http://mserv.trl.mei.co.jp/DMV/dmp15.gif"/>
    <dominant-data
locator="http://mserv.trl.mei.co.jp/DMA/dma15.mp3"/>
</segment>
<segment start="smpte=00:04:31:06" end="smpte=00:04:34:28">
    <pointofview keyword="SUMO WRESTLER1" priority="4"/>
    <dominant-data
locator="http://mserv.trl.mei.co.jp/DMV/dmp16.gif"/>
    <dominant-data
locator="http://mserv.trl.mei.co.jp/DMA/dma16.mp3"/>
</segment>
<segment start="smpte=00:04:34:29" end="smpte=00:04:37:06">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
    <dominant-data
locator="http://mserv.trl.mei.co.jp/DMV/dmp17.gif"/>
    <dominant-data
locator="http://mserv.trl.mei.co.jp/DMA/dma17.mp3"/>
</segment>
<segment start="smpte=00:04:37:07" end="smpte=00:04:57:05">
    <pointofview keyword="SUMO WRESTLER0" priority="5"/>
    <pointofview keyword="SUMO WRESTLER1" priority="5"/>
    <dominant-data
locator="http://mserv.trl.mei.co.jp/DMV/dmp18.gif"/>
    <dominant-data
locator="http://mserv.trl.mei.co.jp/DMA/dma18.mp3"/>
</segment>
<segment start="smpte=00:04:57:06" end="smpte=00:05:00:02">
    <pointofview keyword="SUMO WRESTLER0" priority="5"/>
    <dominant-data
locator="http://mserv.trl.mei.co.jp/DMV/dmp19.gif"/>
    <dominant-data
locator="http://mserv.trl.mei.co.jp/DMA/dma19.mp3"/>
</segment>
<segment start="smpte=00:05:00:03" end="smpte=00:05:02:06">
    <pointofview keyword="SUMO WRESTLER0" priority="5"/>
    <pointofview keyword="SUMO WRESTLER1" priority="5"/>
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp20.
gif"/>
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma20.
mp3"/>
</segment>
```

FIG. 74

```
</section>
<section>
  <segment start="smpte=00:05:02:07" end="smpte=00:05:04:16">
    <dominant-data    start="smpte=00:05:03:02"    end="smpte=
00:05:02:20"/>
    </segment>
  </section>
  <section>
    <pointofview keyword="SUMO WRESTLER0" priority="5"/>
    <segment start="smpte=00:05:04:17" end="smpte=00:05:13:25">
      <pointofview keyword="SUMO WRESTLER0" priority="5"/>
      <dominant-data    locator="http://mserv.trl.mei.co.jp/DMV/dmp21.
gif"/>
      <dominant-data    locator="http://mserv.trl.mei.co.jp/DMA/dma21.
mp3"/>
      </segment>
      <segment start="smpte=00:05:13:26" end="smpte=00:05:17:01">
        <pointofview keyword="SUMO WRESTLER0" priority="5"/>
        <dominant-data    locator="http://mserv.trl.mei.co.jp/DMV/dmp22.
gif"/>
        <dominant-data    locator="http://mserv.trl.mei.co.jp/DMA/dma22.
mp3"/>
        </segment>
        <segment start="smpte=00:05:17:02" end="smpte=00:05:23:21">
          <pointofview keyword="SUMO WRESTLER0" priority="4"/>
          <dominant-data    locator="http://mserv.trl.mei.co.jp/DMV/dmp23.
gif"/>
          <dominant-data    locator="http://mserv.trl.mei.co.jp/DMA/dma23.
mp3"/>
          </segment>
        </section>
        <section>
          <pointofview keyword="VIDEO" priority="4"/>
          <pointofview keyword="SUMO WRESTLER0" priority="4"/>
          <pointofview keyword="SUMO WRESTLER1" priority="4"/>
          <segment start="smpte=00:05:23:22" end="smpte=00:05:44:15">
            <pointofview keyword="VIDEO" priority="4"/>
            <pointofview keyword="SUMO WRESTLER0" priority="5"/>
            <pointofview keyword="SUMO WRESTLER1" priority="4"/>
            <dominant-data    locator="http://mserv.trl.mei.co.jp/DMV/dmp24.
gif"/>
            <dominant-data    locator="http://mserv.trl.mei.co.jp/DMA/dma24.
mp3"/>
            </segment>
```

FIG. 75

```
<segment start="smpte=00:05:44:16" end="smpte=00:05:50:27">
  <pointofview keyword="VIDEO" priority="4"/>
  <pointofview keyword="SUMO WRESTLER0" priority="5"/>
  <pointofview keyword="SUMO WRESTLER1" priority="4"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp25.
  gif"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma25.
  mp3"/>
</segment>
<segment start="smpte=00:05:50:28" end="smpte=00:06:08:15">
  <pointofview keyword="VIDEO" priority="4"/>
  <pointofview keyword="SUMO WRESTLER0" priority="4"/>
  <pointofview keyword="SUMO WRESTLER1" priority="4"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp26.
  gif"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma26.
  mp3"/>
</segment>
<segment start="smpte=00:06:08:16" end="smpte=00:06:18:05">
  <pointofview keyword="VIDEO" priority="4"/>
  <pointofview keyword="SUMO WRESTLER0" priority="4"/>
  <pointofview keyword="SUMO WRESTLER1" priority="4"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp27.
  gif"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma27.
  mp3"/>
</segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER0" priority="4"/>
  <segment start="smpte=00:06:18:06" end="smpte=00:06:24:04">
    <dominant-data start="smpte=00:06:18:25" end="smpte=
  00:06:20:17"/>
  </segment>
  <segment start="smpte=00:06:24:05" end="smpte=00:06:41:04">
    <dominant-data start="smpte=00:06:25:01" end="smpte=
  00:06:30:11"/>
  </segment>
</section>
</section>
<section caption="SUMO WRESTLER2 VS. SUMO WRESTLER3">
  <pointofview keyword="SUMO WRESTLER2" priority="5"/>
  <pointofview keyword="SUMO WRESTLER3" priority="5"/>
  <section>
```

FIG. 76

```
<pointofview keyword="SUMO NAME" priority="4"/>
<pointofview keyword="SUMO WRESTLER2" priority="5"/>
<pointofview keyword="SUMO WRESTLER3" priority="5"/>
<segment start="smpte=00:06:18:05" end="smpte=00:07:00:24">
    <pointofview keyword="SUMO NAME" priority="4"/>
    <pointofview keyword="SUMO WRESTLER2" priority="5"/>
    <pointofview keyword="SUMO WRESTLER3" priority="5"/>
    <dominant-data
locator="http://mserv.trl.mei.co.jp/DMV/dmp28.gif"/>
    <dominant-data
locator="http://mserv.trl.mei.co.jp/DMA/dma28.mp3"/>
    </segment>
</section>
<section>
    <pointofview keyword="WIN-LOSS REORD" priority="3"/>
    <pointofview keyword="SUMO WRESTLER2" priority="4"/>
    <pointofview keyword="SUMO WRESTLER3" priority="4"/>
    <segment start="smpte=00:07:00:25" end="smpte=00:07:15:21">
        <pointofview keyword="WIN-LOSS RECORD" priority="3"/>
        <pointofview keyword="SUMO WRESTLER2" priority="4"/>
        <pointofview keyword="SUMO WRESTLER3" priority="4"/>
        <dominant-data    locator="http://mserv.trl.mei.co.jp/DMV/dmp29.
gif"/>
        <dominant-data    locator="http://mserv.trl.mei.co.jp/DMA/dma29.
mp3"/>
        </segment>
    </section>
    <section>
        <pointofview keyword="SUMO WRESTLER0" priority="2"/>
        <segment start="smpte=00:07:15:22" end="smpte=00:07:39:26">
            <pointofview keyword="SUMO WRESTLER0" priority="2"/>
            <dominant-data    start="smpte=00:07:16:05"      end="smpte=
00:07:18:23"/>
            </segment>
        </section>
        <section>
            <pointofview keyword="SUMO WRESTLER2" priority="4"/>
            <segment start="smpte=00:07:39:27" end="smpte=00:07:46:02">
                <pointofview keyword="SUMO WRESTLER2" priority="4"/>
                <dominant-data    start="smpte=00:07:41:28"      end="smpte=
00:07:43:01"/>
                </segment>
            </section>
            <section>
```

FIG. 77

```
<pointofview keyword="SUMO WRESTLER2" priority="4"/>
<pointofview keyword="SUMO WRESTLER3" priority="4"/>
<segment start="smpte=00:07:46:03" end="smpte=00:07:53:17">
    <pointofview keyword="SUMO WRESTLER2" priority="4"/>
    <pointofview keyword="SUMO WRESTLER3" priority="4"/>
    <dominant-data
        locator="http://mserv.trl.mei.co.jp/DMV/dmp30.gif"/>
        <dominant-data
            locator="http://mserv.trl.mei.co.jp/DMA/dma30.mp3"/>
        </segment>
    </section>
    <section>
        <pointofview keyword="SUMO WRESTLER3" priority="4"/>
        <segment start="smpte=00:07:53:18" end="smpte=00:08:01:21">
            <pointofview keyword="SUMO WRESTLER3" priority="4"/>
            <dominant-data
                locator="http://mserv.trl.mei.co.jp/DMV/dmp31.gif"/>
                <dominant-data
                    locator="http://mserv.trl.mei.co.jp/DMA/dma31.mp3"/>
                </segment>
            </section>
            <section>
                <pointofview keyword="SUMO WRESTLER2" priority="4"/>
                <pointofview keyword="SUMO WRESTLER3" priority="4"/>
                <segment start="smpte=00:08:01:22" end="smpte=00:08:18:02">
                    <pointofview keyword="SUMO WRESTLER2" priority="4"/>
                    <pointofview keyword="SUMO WRESTLER3" priority="4"/>
                    <dominant-data    locator="http://mserv.trl.mei.co.jp/DMV/dmp32.
                gif"/>
                    <dominant-data    locator="http://mserv.trl.mei.co.jp/DMA/dma32.
                mp3"/>
                </segment>
                <segment start="smpte=00:08:18:03" end="smpte=00:08:39:05">
                    <pointofview keyword="SUMO WRESTLER2" priority="4"/>
                    <dominant-data    locator="http://mserv.trl.mei.co.jp/DMV/dmp33.
                gif"/>
                    <dominant-data    locator="http://mserv.trl.mei.co.jp/DMA/dma33.
                mp3"/>
                </segment>
                <segment start="smpte=00:08:39:06" end="smpte=00:08:47:06">
                    <pointofview keyword="SUMO WRESTLER2" priority="4"/>
                    <pointofview keyword="SUMO WRESTLER3" priority="4"/>
                    <dominant-data    locator="http://mserv.trl.mei.co.jp/DMV/dmp34.
                gif"/>
```

FIG. 78

```
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma34.
mp3"/>
  </segment>
  <segment start="smpte=00:08:47:07" end="smpte=00:09:03:27">
    <pointofview keyword="SUMO WRESTLER2" priority="4"/>
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp35.
gif"/>
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma35.
mp3"/>
        </segment>
        <segment start="smpte=00:09:03:28" end="smpte=00:09:07:20">
          <pointofview keyword="SUMO WRESTLER3" priority="4"/>
          <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp36.
gif"/>
            <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma36.
mp3"/>
              </segment>
              <segment start="smpte=00:09:07:21" end="smpte=00:09:16:26">
                <pointofview keyword="SUMO WRESTLER2" priority="4"/>
                <pointofview keyword="SUMO WRESTLER3" priority="4"/>
                <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp37.
gif"/>
                  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma37.
mp3"/>
                    </segment>
                    <segment start="smpte=00:09:16:27" end="smpte=00:09:20:25">
                      <pointofview keyword="SUMO WRESTLER2" priority="4"/>
                      <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp38.
gif"/>
                        <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma38.
mp3"/>
                          </segment>
                          <segment start="smpte=00:09:20:26" end="smpte=00:09:22:27">
                            <pointofview keyword="SUMO WRESTLER3" priority="4"/>
                            <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp39.
gif"/>
                              <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma39.
mp3"/>
                                </segment>
                              </section>
                            <section>
                              <pointofview keyword="SUMO WRESTLER2" priority="5"/>
                              <pointofview keyword="SUMO WRESTLER3" priority="5"/>
                              <segment start="smpte=00:09:22:28" end="smpte=00:09:48:11">
```

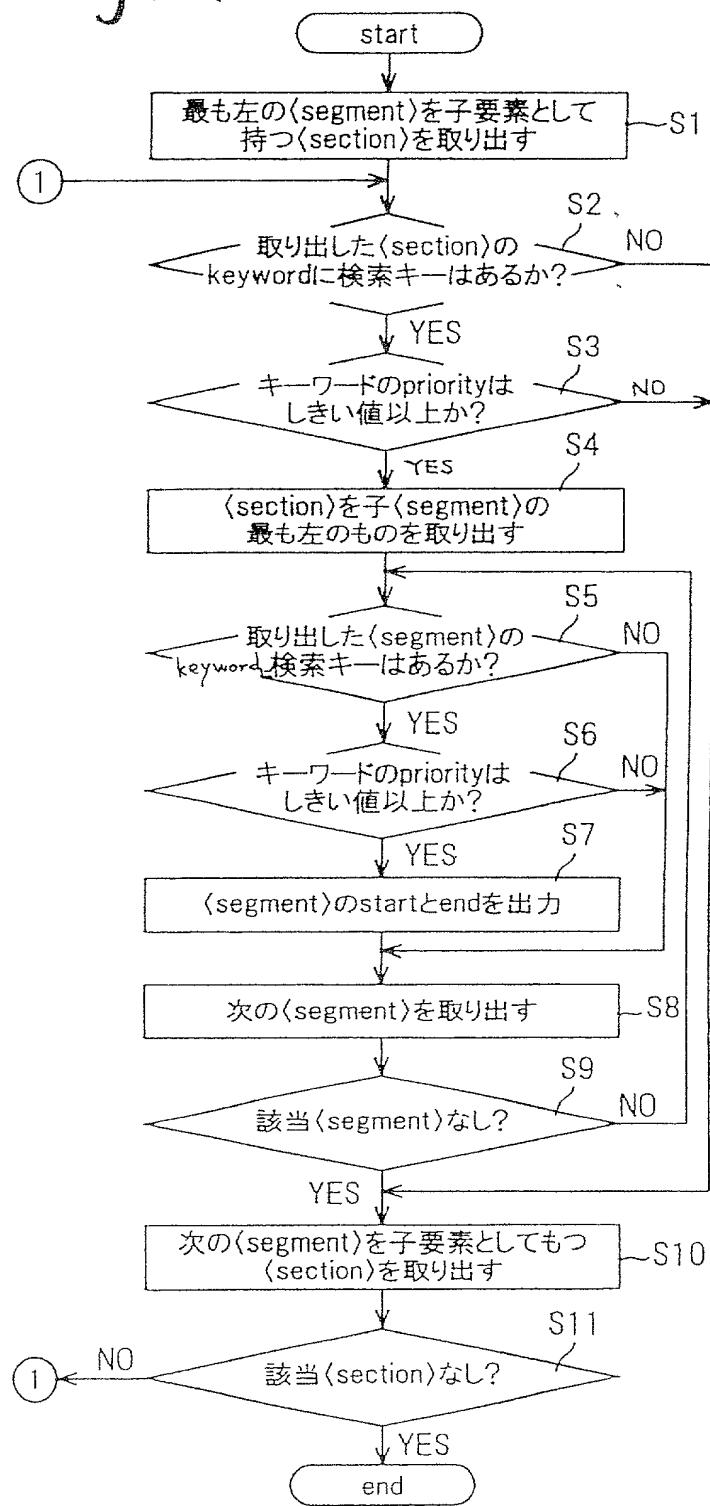
FIG. 79

```
<pointofview keyword="SUMO WRESTLER2" priority="5"/>
<pointofview keyword="SUMO WRESTLER3" priority="5"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp40.
gif"/>
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma40.
mp3"/>
    </segment>
    <segment start="smpte=00:09:48:12" end="smpte=00:09:51:27">
        <pointofview keyword="SUMO WRESTLER2" priority="5"/>
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp41.
gif"/>
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma41.
mp3"/>
        </segment>
        <segment start="smpte=00:09:51:28" end="smpte=00:09:57:01">
            <pointofview keyword="SUMO WRESTLER2" priority="4"/>
            <pointofview keyword="SUMO WRESTLER3" priority="4"/>
            <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp42.
gif"/>
            <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma42.
mp3"/>
            </segment>
            <segment start="smpte=00:09:57:02" end="smpte=00:10:12:21">
                <pointofview keyword="SUMO WRESTLER2" priority="4"/>
                <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp43.
gif"/>
                <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma43.
mp3"/>
                </segment>
            </section>
            <section>
                <pointofview keyword="VIDEO" priority="4"/>
                <pointofview keyword="SUMO WRESTLER2" priority="4"/>
                <pointofview keyword="SUMO WRESTLER3" priority="4"/>
                <segment start="smpte=00:10:12:22" end="smpte=00:10:41:17">
                    <pointofview keyword="VIDEO" priority="4"/>
                    <pointofview keyword="SUMO WRESTLER2" priority="4"/>
                    <pointofview keyword="SUMO WRESTLER3" priority="4"/>
                    <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp44.
gif"/>
                    <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma44.
mp3"/>
                </segment>
```

FIG. 80

```
</section>
<section>
  <pointofview keyword="SUMO WRESTLER2" priority="5"/>
  <segment start="smpte=00:10:41:18" end="smpte=00:11:28:17">
    <dominant-data  locator="http://mserv.trl.mei.co.jp/DMV/dmp45.
gif"/>
    <dominant-data  locator="http://mserv.trl.mei.co.jp/DMA/dma45.
mp3"/>
  </segment>
</section>
<section>
  <segment start="smpte=00:11:28:18" end="smpte=00:11:41:29">
    <dominant-data  start="smpte=00:11:29:13"      end="smpte=
11:32:21"/>
  </segment>
</section>
</section>
</contents>
```

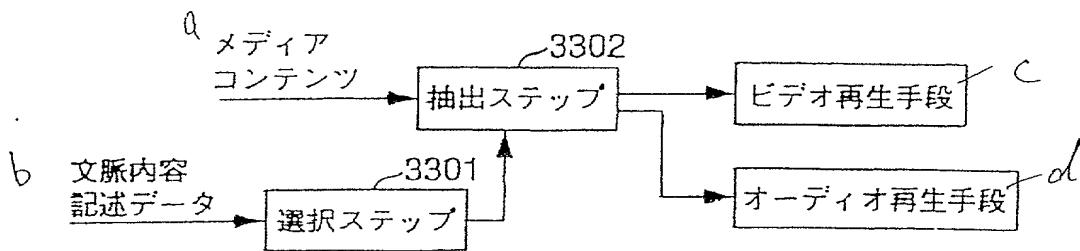
【図81】 Fig.81



[FIG. 81]

S1 ACQUIRE LEFTMOST ELEMENT <section> HAVING \$UCCESSORS\$ <segment>
 S2 DOES KEYWORD OF ACQUIRED ELEMENT <section> INCLUDE RETRIEVAL KEY?
 S3 DOES PRIORITY OF KEYWORD EXCEED THRESHOLD VALUE?
 S4 ACQUIRE LEFTMOST ELEMENT <section> HAVING \$UCCESSORS\$ <segment>
 S5 DOES KEYWORD OF EXTRACTED ELEMENT <segment> INCLUDE RETRIEVAL KEY?
 S6 DOES PRIORITY OF KEYWORD EXCEED THRESHOLD VALUE?
 S7 OUTPUT VALUES OF "start" AND "end" OF ELEMENT <segment>
 S8 EXTRACT NEXT ELEMENT <segment>
 S9 IS THERE NO CORRESPONDING ELEMENT?
 S10 ACQUIRE NEXT ELEMENT <section> HAVING \$UCCESSOR\$ <segment>
 S11 IS THERE NO CORRESPONDING ELEMENT?

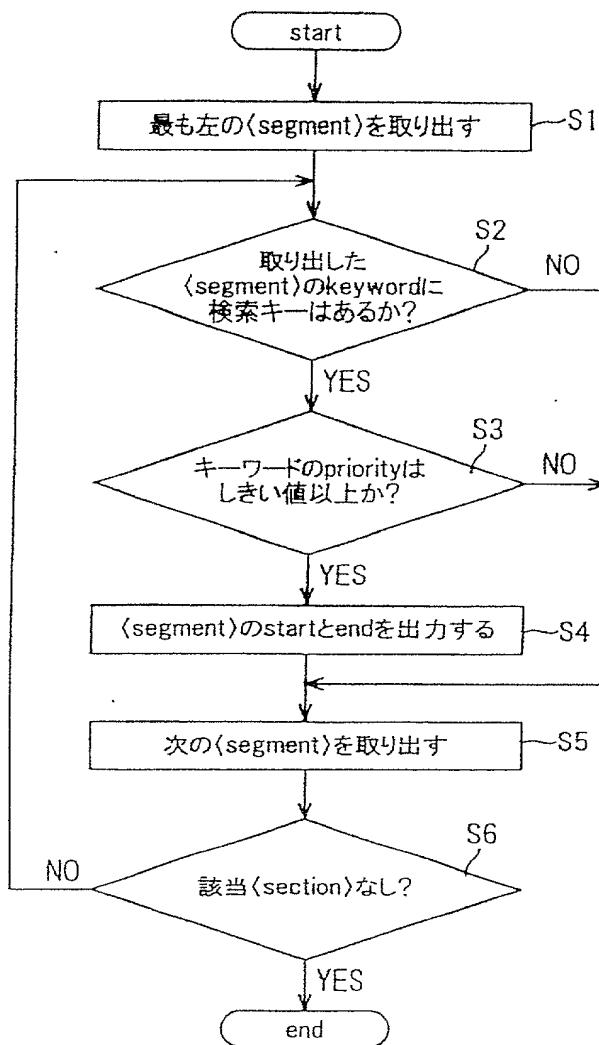
【図82】 Fig. 82



[FIG. 82]

- a MEDIA CONTENT
- b CONTEXT DESCRIPTION DATA
- 3301 THE SELECTION STEP
- 3302 THE EXTRACTION STEP
- c VIDEO PLAYBACK MEANS
- d AUDIO PLAYBACK MEANS

【図 83】 Fig. 83



[FIG. 83]

S1 ACQUIRE LEFTMOST ELEMENT <segment>

S2 DOES KEYWORD OF ACQUIRED ELEMENT <segment> INCLUDE RETRIEVAL KEY?

S3 DOES PRIORITY OF KEYWORD EXCEED THRESHOLD VALUE?

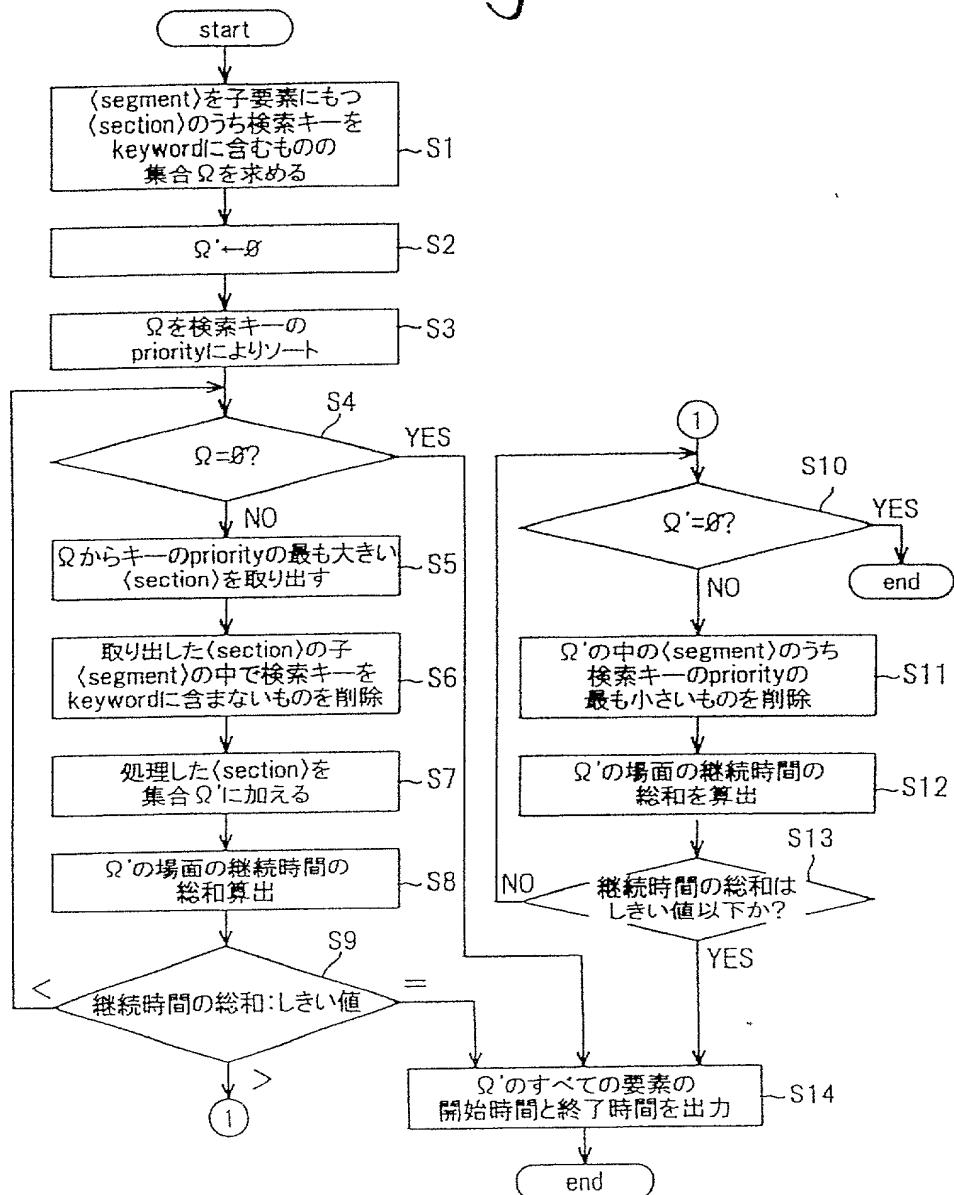
S4 OUTPUT VALUES OF "start" AND "end" OF ELEMENT <segment>

S5 EXTRACT NEXT ELEMENT <segment>

S6 IS THERE NO CORRESPONDING ELEMENT?

[図 8.4]

Fig. 84



[FIG. 84]

S1 SEEK SET Ω OF ELEMENTS <section> OF ELEMENTS <section> HAVING \$^{CHILDREN} \$<segment>S3 SORT ELEMENTS OF SET Ω IN SEQUENCE OF PRIORITYS5 ACQUIRE ELEMENT <section> HAVING HIGHEST PRIORITY FROM ELEMENTS IN SET Ω S6 DELETE \$^{CHILDREN} \$<segment> OF EXTRACTED ELEMENTS <section> WHOSE KEYWORDS DO NOT INCLUDE RETRIEVAL KEYS7 ADD ELEMENTS <section> THAT ARE SUBJECTED TO PROCESSING TO SET Ω' S8 CALCULATE TOTAL AMOUNT OF DURATION PERIODS OF SCENES OF SET Ω'

S9 TOTAL AMOUNT OF DURATION PERIODS: THRESHOLD VALUE

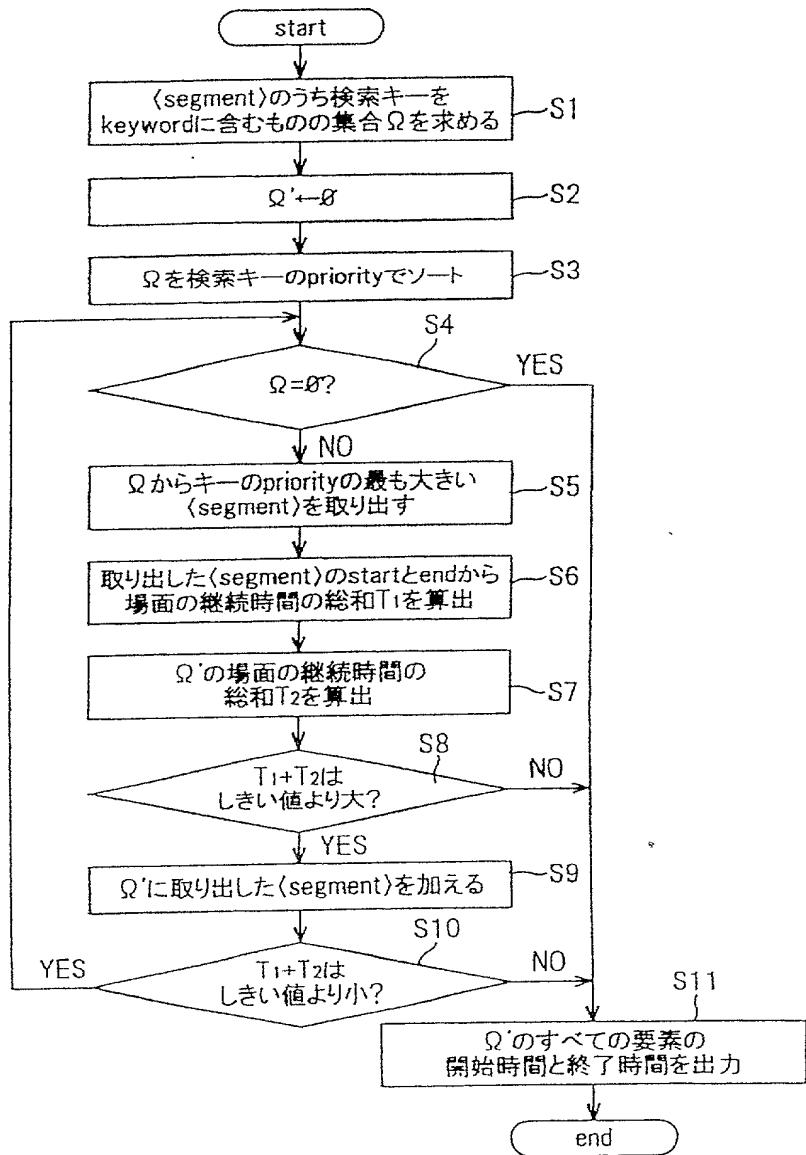
S11 DELETE \$^{CHILDREN} \$<segment> WHOSE RETRIEVAL KEYS HAVING MINIMUM PRIORITY FROM AMONG \$^{CHILDREN} \$<successors> IN SET Ω' S12 CALCULATE TOTAL AMOUNT OF DURATION PERIODS OF SCENES OF SET Ω'

S13 IS TOTAL AMOUNT OF DURATION PERIODS LOWER THAN THRESHOLD VALUE?

S14 OUTPUT DATA SETS RELATING TO START TIME AND END TIME OF ALL ELEMENTS <section> OF SET Ω'

【図85】

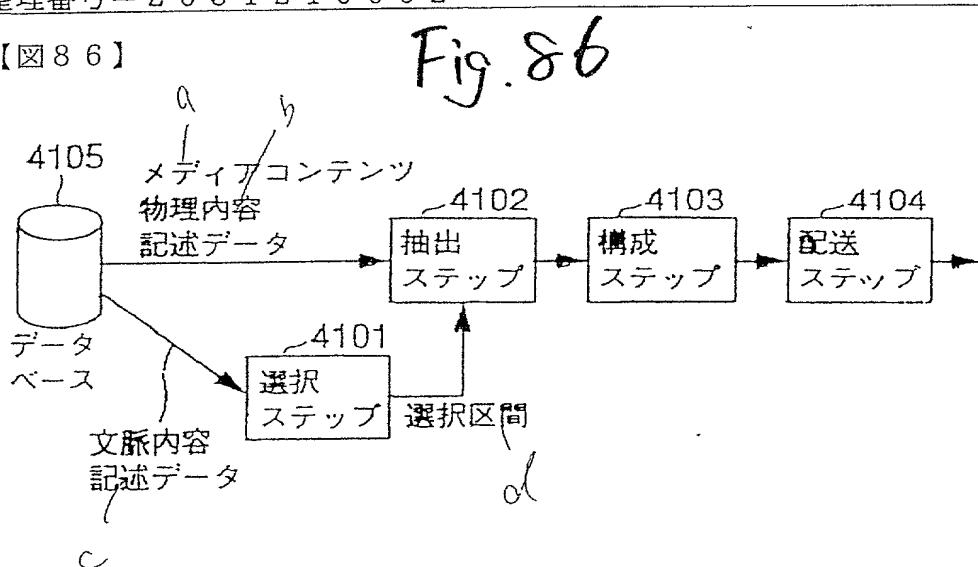
Fig. 85



[FIG. 85]

S1 SEEK SET Ω OF ELEMENTS $\langle\text{segment}\rangle$ WHOSE KEYWORDS INCLUDE RETRIEVAL KEYS
 S3 SORT THE ELEMENTS IN SET Ω IN ORDER OF PRIORITY THROUGH USE OF RETRIEVAL KEYS
 S5 EXTRACT ELEMENT $\langle\text{segment}\rangle$ WHOSE RETRIEVAL KEYS HAVE MAXIMUM PRIORITY FROM SET Ω
 S6 CALCULATE TOTAL AMOUNT, T_1 , OF DURATION PERIODS OF SCENES DEFINED BY "from" AND "to" OF EXTRACTED ELEMENT $\langle\text{segment}\rangle$
 S7 CALCULATE TOTAL AMOUNT, T_2 , OF DURATION PERIODS OF SET Ω'
 S8 DOES SUM OF T_1+T_2 EXCEED THRESHOLD VALUE?
 S9 ADD EXTRACTED ELEMENTS $\langle\text{segment}\rangle$ TO SET Ω'
 S10 DOES SUM OF T_1+T_2 EXCEED THRESHOLD VALUE?
 S11 OUTPUT DATA PERTAINING TO START TIME AND END TIME OF ALL ELEMENTS INCLUDED IN SET Ω'

【図 86】



[FIG. 86]

- 4105 DATABASE
- a MEDIA CONTENT
- b PHYSICAL DESCRIPTION DATA
- c CONTEXT DESCRIPTION DATA
- 4101 THE SELECTION STEP
- d SELECTION SEGMENT
- 4102 THE EXTRACTION STEP
- 4103 THE FORMATION STEP
- 4104 THE DELIVERY STEP

【図 87】

Fig. 87

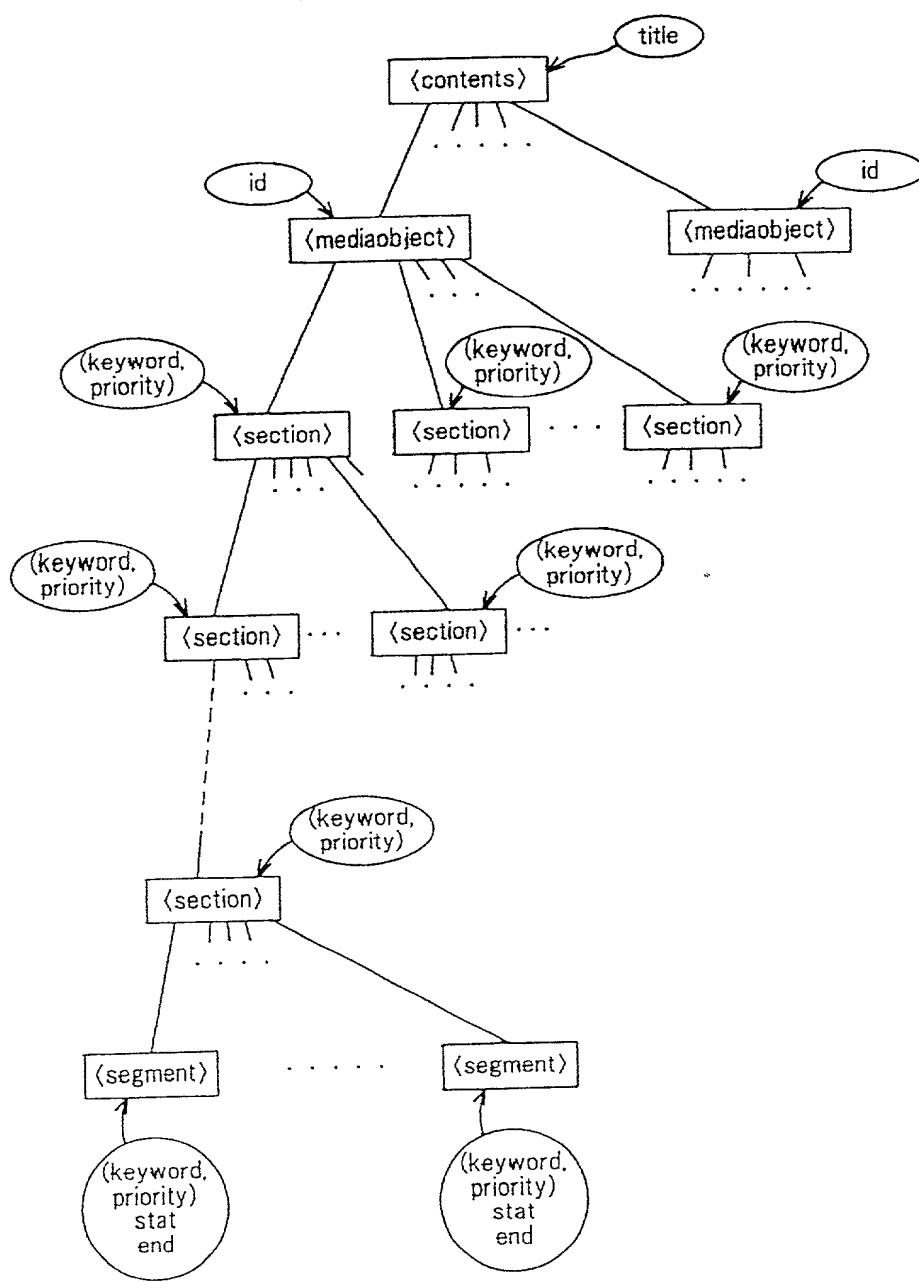


FIG. 88

ONE EXAMPLE OF DTD TO BE USED FOR DESCRIBING CONTEXT DESCRIPTION DATA IN XML

```
<?xml version="1.0"?>

<!ELEMENT contents      (mediaobject+)
<!ATTLIST  contents  contents-id  CDATA      #REQUIRED
              title      CDATA      #REQUIRED
              runtime    NMTOKEN   #REQUIRED>
<!ELEMENT mediaobject  (section+)
<!ATTLIST  mediaobject id        CDATA      #REQUIRED>
<!ELEMENT section      (pointofview*,(section+|segment+))
<!ATTLIST  section    caption    CDATA      #IMPLIED>
<!ELEMENT segment      (pointofview*)
<!ATTLIST  segment    start      CDATA      #REQUIRED
              end        CDATA      #REQUIRED>
<!ELEMENT pointofview  EMPTY>
<!ATTLIST  pointofview keyword   CDATA      #REQUIRED
              priority  NMTOKEN   #REQUIRED>
```

ONE EXAMPLE OF XML DOCUMENT RELATING TO CONTEXT DESCRIPTION DATA PREPARED BY DTD

```
<?xml version="1.0" encoding="euc-jp"?>
<!DOCTYPE contents SYSTEM "http://mserv.trl.mei.co.jp/SMML/program08.dtd">

<contents contents-id="urn:upi:mei:12345" title="GRAND SUMO TOUR NAMENT" runtime="11:42">
  <mediaobject id="mobj-01">
    <section caption="SUMO WRESTLER0 VS. SUMO WRESTLER1">
      <pointofview keyword="SUMO WRESTLER0" priority="5"/>
      <pointofview keyword="SUMO WRESTLER1" priority="5"/>
      <section>
        <pointofview keyword="SUMO WRESTLER4" priority="1"/>
        <segment start="smpte=00:00:00:00" end="smpte=00:00:04:17">
          </segment>
        </section>
        <section>
          <segment start="smpte=00:00:04:18" end="smpte=00:00:09:08">
            </segment>
          </section>
        </section>
      </section>
```

FIG. 89

```
<pointofview keyword="SUMO WRESTLER0" priority="4"/>
<segment start="smpte=00:00:09:09" end="smpte=00:00:14:13">
</segment>
</section>
<section>
<pointofview keyword="SUMO WRESTLER0" priority="3"/>
<pointofview keyword="SUMO WRESTLER1" priority="3"/>
<segment start="smpte=00:00:14:14" end="smpte=00:00:19:19">
<pointofview keyword="SUMO WRESTLER0" priority="3"/>
<pointofview keyword="SUMO WRESTLER1" priority="3"/>
</segment>
<segment start="smpte=00:00:19:20" end="smpte=00:00:22:19">
<pointofview keyword="SUMO WRESTLER0" priority="1"/>
</segment>
<segment start="smpte=00:00:22:20" end="smpte=00:00:28:10">
<pointofview keyword="SUMO WRESTLER0" priority="3"/>
<pointofview keyword="SUMO WRESTLER1" priority="3"/>
</segment>
</section>
<section>
<pointofview keyword="SUMO WRESTLER0" priority="3"/>
<pointofview keyword="SUMO WRESTLER4" priority="2"/>
<segment start="smpte=00:00:28:11" end="smpte=00:00:30:28">
<pointofview keyword="SUMO WRESTLER0" priority="3"/>
<pointofview keyword="SUMO WRESTLER4" priority="2"/>
</segment>
<segment start="smpte=00:00:30:29" end="smpte=00:00:43:11">
<pointofview keyword="SUMO WRESTLER0" priority="3"/>
<pointofview keyword="SUMO WRESTLER4" priority="1"/>
</segment>
</section>
<section>
<pointofview keyword="SUMO WRESTLER0" priority="3"/>
<pointofview keyword="SUMO WRESTLER1" priority="3"/>
<segment start="smpte=00:00:43:12" end="smpte=00:00:46:20">
<pointofview keyword="SUMO WRESTLER0" priority="3"/>
<pointofview keyword="SUMO WRESTLER1" priority="3"/>
</segment>
</section>
<section>
<pointofview keyword="SUMO WRESTLER0" priority="4"/>
<segment start="smpte=00:00:46:21" end="smpte=00:00:57:09">
<pointofview keyword="SUMO WRESTLER0" priority="4"/>
```

FIG. 90

```
</segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER0" priority="3"/>
  <pointofview keyword="SUMO WRESTLER1" priority="3"/>
  <segment start="smpte=00:00:57:10" end="smpte=00:01:00:28">
    </segment>
  </section>
<section>
  <pointofview keyword="SUMO NAME" priority="4"/>
  <pointofview keyword="SUMO WRESTLER0" priority="5"/>
  <pointofview keyword="SUMO WRESTLER1" priority="5"/>
  <segment start="smpte=00:01:00:29" end="smpte=00:01:14:14">
    </segment>
  </section>
<section>
  <pointofview keyword="SUMO WRESTLER0" priority="2"/>
  <pointofview keyword="SUMO WRESTLER1" priority="2"/>
  <segment start="smpte=00:01:14:15" end="smpte=00:01:24:20">
    </segment>
  </section>
<section>
  <pointofview keyword="WIN-LOSS RECORD" priority="3"/>
  <pointofview keyword="SUMO WRESTLER0" priority="4"/>
  <pointofview keyword="SUMO WRESTLER1" priority="4"/>
  <segment start="smpte=00:01:24:21" end="smpte=00:01:39:26">
    </segment>
  </section>
<section>
  <pointofview keyword="SUMO WRESTLER0" priority="4"/>
  <pointofview keyword="SUMO WRESTLER1" priority="4"/>
  <segment start="smpte=00:01:39:27" end="smpte=00:01:52:09">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
    <pointofview keyword="SUMO WRESTLER1" priority="1"/>
  </segment>
  <segment start="smpte=00:01:52:10" end="smpte=00:02:02:16">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
  </segment>
  <segment start="smpte=00:02:02:17" end="smpte=00:02:31:09">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
    <pointofview keyword="SUMO WRESTLER1" priority="4"/>
```

FIG. 91

```
</segment>
<segment start="smpte=00:02:31:10" end="smpte=00:02:47:18">
  <pointofview keyword="SUMO WRESTLER0" priority="4"/>
</segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER2" priority="2"/>
  <segment start="smpte=00:02:47:19" end="smpte=00:02:59:03">
    </segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER5" priority="2"/>
  <segment start="smpte=00:02:59:04" end="smpte=00:03:07:14">
    </segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER0" priority="3"/>
  <pointofview keyword="SUMO WRESTLER1" priority="3"/>
  <segment start="smpte=00:03:07:15" end="smpte=00:03:13:28">
    <pointofview keyword="SUMO WRESTLER0" priority="3"/>
    <pointofview keyword="SUMO WRESTLER1" priority="3"/>
  </segment>
  <segment start="smpte=00:03:13:29" end="smpte=00:03:21:28">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
  </segment>
  <segment start="smpte=00:03:21:29" end="smpte=00:03:33:15">
    <pointofview keyword="SUMO WRESTLER1" priority="4"/>
  </segment>
  <segment start="smpte=00:03:33:16" end="smpte=00:03:47:00">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
    <pointofview keyword="SUMO WRESTLER1" priority="4"/>
  </segment>
  <segment start="smpte=00:03:47:01" end="smpte=00:03:58:14">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
  </segment>
  <segment start="smpte=00:03:58:15" end="smpte=00:04:12:27">
    <pointofview keyword="SUMO WRESTLER1" priority="4"/>
  </segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER0" priority="5"/>
  <pointofview keyword="SUMO WRESTLER1" priority="5"/>
  <segment start="smpte=00:04:12:28" end="smpte=00:04:20:01">
```

FIG. 92

```
<pointofview keyword="SUMO WRESTLER0" priority="4"/>
<pointofview keyword="SUMO WRESTLER1" priority="4"/>
</segment>
<segment start="smpte=00:04:20:02" end="smpte=00:04:31:05">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
</segment>
<segment start="smpte=00:04:31:06" end="smpte=00:04:34:28">
    <pointofview keyword="SUMO WRESTLER1" priority="4"/>
</segment>
<segment start="smpte=00:04:34:29" end="smpte=00:04:37:06">
    <pointofview keyword="SUMO WRESTLER0" priority="4"/>
</segment>
<segment start="smpte=00:04:37:07" end="smpte=00:04:57:05">
    <pointofview keyword="SUMO WRESTLER0" priority="5"/>
    <pointofview keyword="SUMO WRESTLER1" priority="5"/>
</segment>
<segment start="smpte=00:04:57:06" end="smpte=00:05:00:02">
    <pointofview keyword="SUMO WRESTLER0" priority="5"/>
</segment>
<segment start="smpte=00:05:00:03" end="smpte=00:05:02:06">
    <pointofview keyword="SUMO WRESTLER0" priority="5"/>
    <pointofview keyword="SUMO WRESTLER1" priority="5"/>
</segment>
</section>
<section>
    <segment start="smpte=00:05:02:07" end="smpte=00:05:04:16">
    </segment>
</section>
<section>
    <pointofview keyword="SUMO WRESTLER0" priority="5"/>
    <segment start="smpte=00:05:04:17" end="smpte=00:05:13:25">
        <pointofview keyword="SUMO WRESTLER0" priority="5"/>
    </segment>
    <segment start="smpte=00:05:13:26" end="smpte=00:05:17:01">
        <pointofview keyword="SUMO WRESTLER0" priority="5"/>
    </segment>
    <segment start="smpte=00:05:17:02" end="smpte=00:05:23:21">
        <pointofview keyword="SUMO WRESTLER0" priority="4"/>
    </segment>
</section>
<section>
    <pointofview keyword="VIDEO" priority="4"/>
```

FIG. 93

```
<pointofview keyword="SUMO WRESTLER0" priority="4"/>
<pointofview keyword="SUMO WRESTLER1" priority="4"/>
<segment start="smpte=00:05:23:22" end="smpte=00:05:44:15">
  <pointofview keyword="VIDEO" priority="4"/>
  <pointofview keyword="SUMO WRESTLER0" priority="5"/>
  <pointofview keyword="SUMO WRESTLER1" priority="4"/>
</segment>
<segment start="smpte=00:05:44:16" end="smpte=00:05:50:27">
  <pointofview keyword="VIDEO" priority="4"/>
  <pointofview keyword="SUMO WRESTLER0" priority="5"/>
  <pointofview keyword="SUMO WRESTLER1" priority="4"/>
</segment>
<segment start="smpte=00:05:50:28" end="smpte=00:06:08:15">
  <pointofview keyword="VIDEO" priority="4"/>
  <pointofview keyword="SUMO WRESTLER0" priority="4"/>
  <pointofview keyword="SUMO WRESTLER1" priority="4"/>
</segment>
<segment start="smpte=00:06:08:16" end="smpte=00:06:18:05">
  <pointofview keyword="VIDEO" priority="4"/>
  <pointofview keyword="SUMO WRESTLER0" priority="4"/>
  <pointofview keyword="SUMO WRESTLER1" priority="4"/>
</segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER0" priority="4"/>
  <segment start="smpte=00:06:18:06" end="smpte=00:06:24:04">
  </segment>
  <segment start="smpte=00:06:24:05" end="smpte=00:06:41:04">
  </segment>
</section>
</section>
</mediaobject>
<mediaobject id="mobj-02">
<section caption="SUMO WRESTLER2 VS. SUMO WRESTLER3">
  <pointofview keyword="SUMO WRESTLER2" priority="5"/>
  <pointofview keyword="SUMO WRESTLER3" priority="5"/>
<section>
  <pointofview keyword="SUMO NAME" priority="4"/>
  <pointofview keyword="SUMO WRESTLER2" priority="5"/>
  <pointofview keyword="SUMO WRESTLER3" priority="5"/>
  <segment start="smpte=00:00:00:00" end="smpte=00:00:42:24">
  </segment>
```

FIG. 94

```
</section>
<section>
  <pointofview keyword="WIN-LOSS RECORD" priority="3"/>
  <pointofview keyword="SUMO WRESTLER2" priority="4"/>
  <pointofview keyword="SUMO WRESTLER3" priority="4"/>
  <segment start="smpte=00:00:42:25" end="smpte=00:00:57:21">
    </segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER0" priority="2"/>
  <segment start="smpte=00:00:57:22" end="smpte=00:01:21:26">
    </segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER2" priority="4"/>
  <segment start="smpte=00:01:21:27" end="smpte=00:01:28:02">
    </segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER2" priority="4"/>
  <pointofview keyword="SUMO WRESTLER3" priority="4"/>
  <segment start="smpte=00:01:28:03" end="smpte=00:01:35:17">
    </segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER3" priority="4"/>
  <segment start="smpte=00:01:35:18" end="smpte=00:01:43:21">
    </segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER2" priority="4"/>
  <pointofview keyword="SUMO WRESTLER3" priority="4"/>
  <segment start="smpte=00:01:43:22" end="smpte=00:02:00:02">
    <pointofview keyword="SUMO WRESTLER2" priority="4"/>
    <pointofview keyword="SUMO WRESTLER3" priority="4"/>
  </segment>
  <segment start="smpte=00:02:00:03" end="smpte=00:02:21:05">
    <pointofview keyword="SUMO WRESTLER2" priority="4"/>
  </segment>
  <segment start="smpte=00:02:21:06" end="smpte=00:02:29:06">
    <pointofview keyword="SUMO WRESTLER2" priority="4"/>
    <pointofview keyword="SUMO WRESTLER3" priority="4"/>
  </segment>
```

FIG. 95

```
<segment start="smpte=00:02:29:07" end="smpte=00:02:45:27">
  <pointofview keyword="SUMO WRESTLER2" priority="4"/>
</segment>
<segment start="smpte=00:02:45:28" end="smpte=00:02:48:20">
  <pointofview keyword="SUMO WRESTLER3" priority="4"/>
</segment>
<segment start="smpte=00:02:49:21" end="smpte=00:02:58:26">
  <pointofview keyword="SUMO WRESTLER2" priority="4"/>
  <pointofview keyword="SUMO WRESTLER3" priority="4"/>
</segment>
<segment start="smpte=00:02:58:27" end="smpte=00:03:02:25">
  <pointofview keyword="SUMO WRESTLER2" priority="4"/>
</segment>
<segment start="smpte=00:03:02:26" end="smpte=00:03:04:27">
  <pointofview keyword="SUMO WRESTLER3" priority="4"/>
</segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER2" priority="5"/>
  <pointofview keyword="SUMO WRESTLER3" priority="5"/>
  <segment start="smpte=00:03:04:28" end="smpte=00:03:30:11">
    <pointofview keyword="SUMO WRESTLER2" priority="5"/>
    <pointofview keyword="SUMO WRESTLER3" priority="5"/>
  </segment>
  <segment start="smpte=00:03:30:12" end="smpte=00:03:33:27">
    <pointofview keyword="SUMO WRESTLER2" priority="5"/>
  </segment>
  <segment start="smpte=00:03:33:28" end="smpte=00:03:39:01">
    <pointofview keyword="SUMO WRESTLER2" priority="4"/>
    <pointofview keyword="SUMO WRESTLER3" priority="4"/>
  </segment>
  <segment start="smpte=00:03:39:02" end="smpte=00:03:54:21">
    <pointofview keyword="SUMO WRESTLER2" priority="4"/>
  </segment>
</section>
<section>
  <pointofview keyword="VIDEO" priority="4"/>
  <pointofview keyword="SUMO WRESTLER2" priority="4"/>
  <pointofview keyword="SUMO WRESTLER3" priority="4"/>
  <segment start="smpte=00:03:54:22" end="smpte=00:04:23:17">
    <pointofview keyword="VIDEO" priority="4"/>
    <pointofview keyword="SUMO WRESTLER2" priority="4"/>
  </segment>

```

FIG. 96

```
    <pointofview keyword="SUMO WRESTLER3" priority="4"/>
    </segment>
  </section>
  <section>
    <pointofview keyword="SUMO WRESTLER2" priority="5"/>
    <segment start="smpte=00:04:23:18" end="smpte=00:05:10:17">
      </segment>
    </section>
    <section>
      <segment start="smpte=00:05:10:18" end="smpte=00:05:23:29">
        </segment>
      </section>
    </section>
  </mediaobject>
</contents>
```

【図 96】

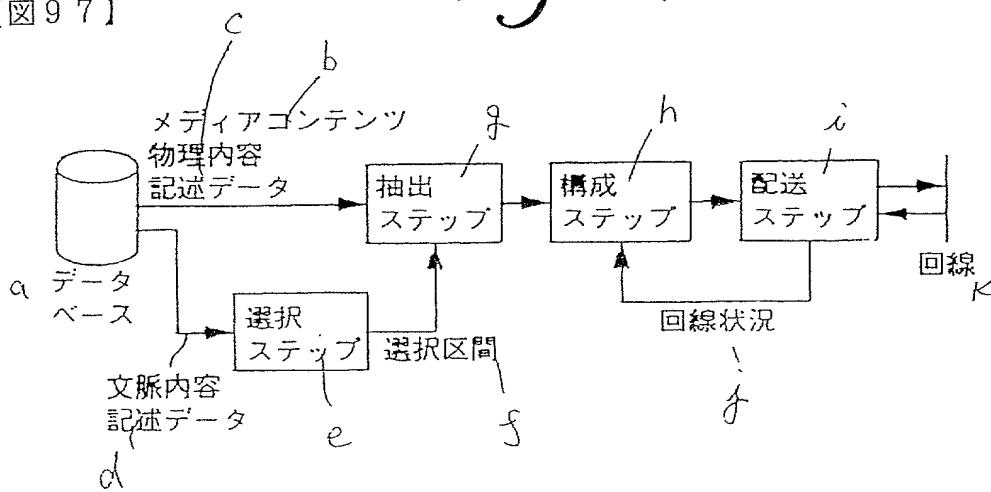
```

<pointofview keyword="力士 3" priority="4"/>
</segment>
</section>
<section>
<pointofview keyword="力士 2" priority="5"/>
<segment start="smpte=00:04:23:18" end="smpte=00:05:10:17">
</segment>
</section>
<section>
<segment start="smpte=00:05:10:18" end="smpte=00:05:23:29">
</segment>
</section>
</section>
</mediaobject>
</content>

```

【図 97】

Fig. 97

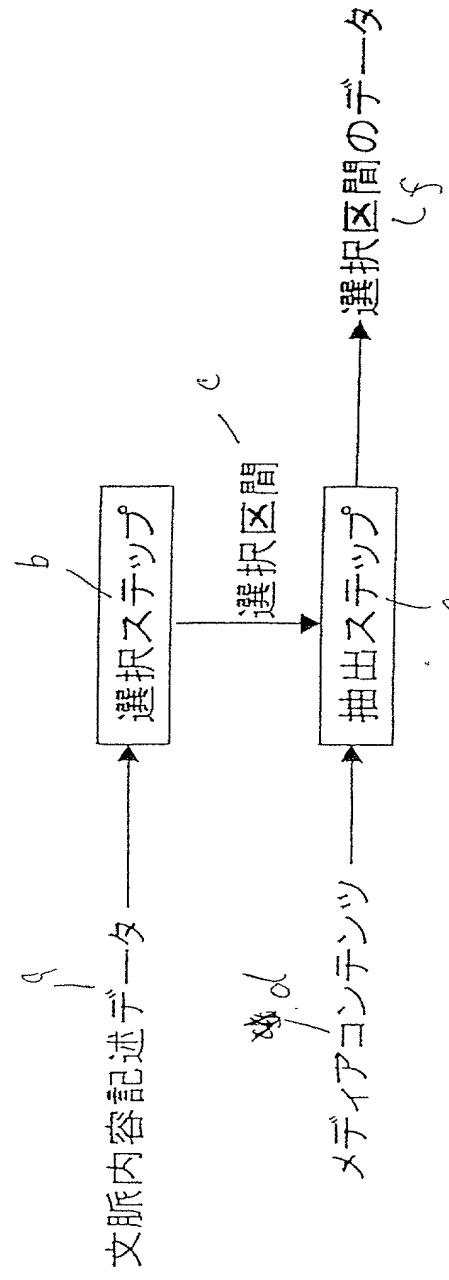


[FIG. 97]

- a DATABASE
- b MEDIA CONTENT
- c PHYSICAL DESCRIPTION DATA
- d CONTEXT DESCRIPTION DATA
- e THE SELECTION STEP
- f SELECTION SEGMENT
- g THE EXTRACTION STEP
- h THE FORMATION STEP
- i THE DELIVERY STEP
- j TRAFFIC VOLUME OF LINE
- K LINE

[図 98]

Fig. 98

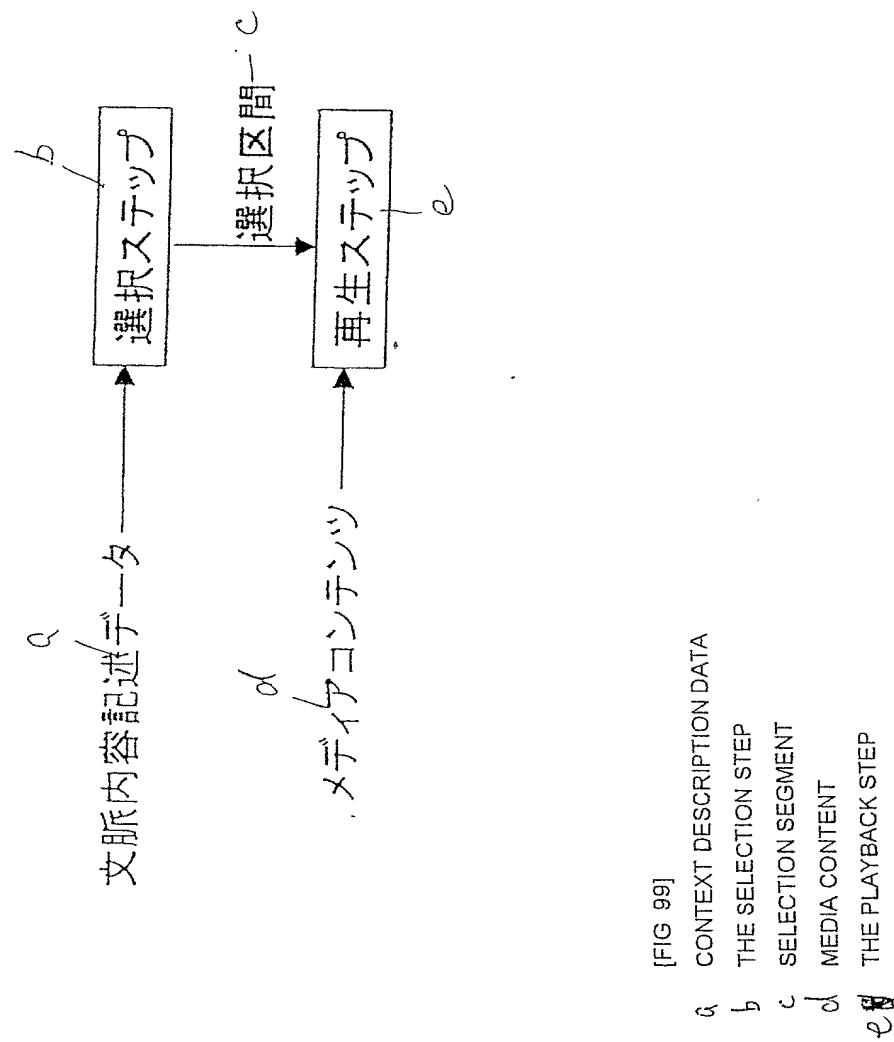


[FIG. 98]

- g CONTEXT DESCRIPTION DATA
- b THE SELECTION STEP
- c SELECTION SEGMENT
- d MEDIA CONTENT
- e THE EXTRACTION STEP
- f DATA PERTAINING TO SELECTION SEGMENT

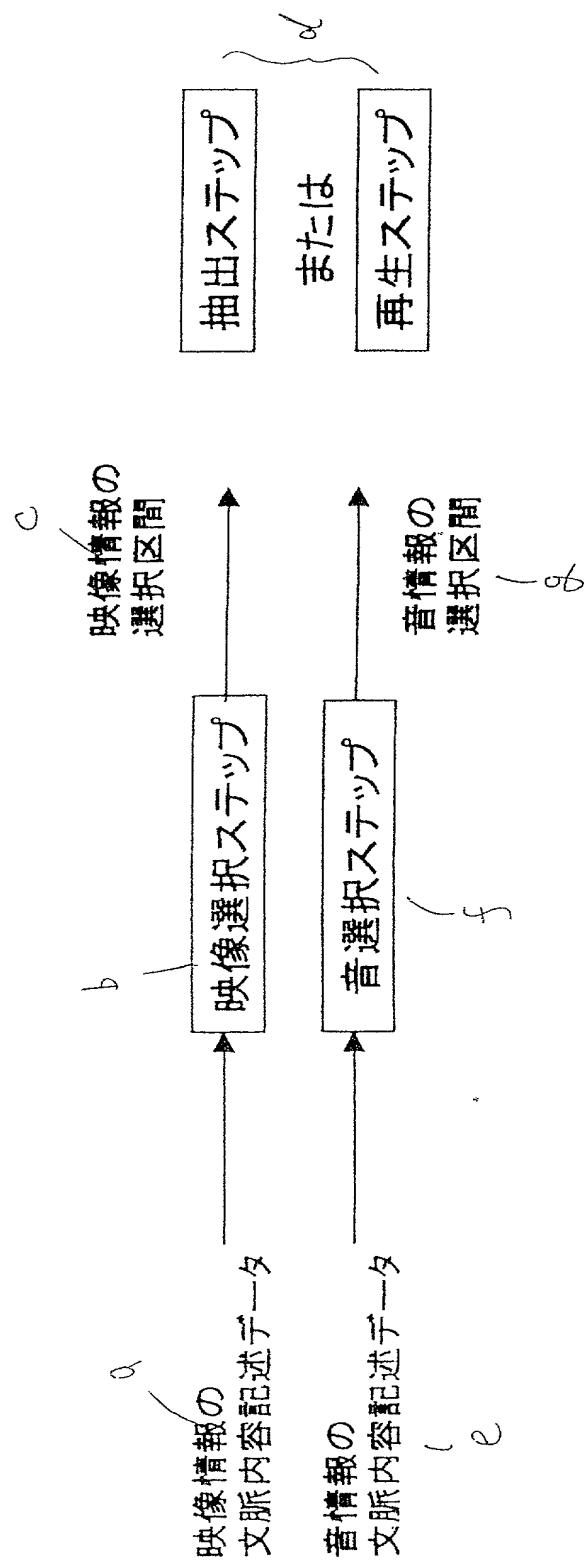
【図 99】

Fig. 99



【図 100】

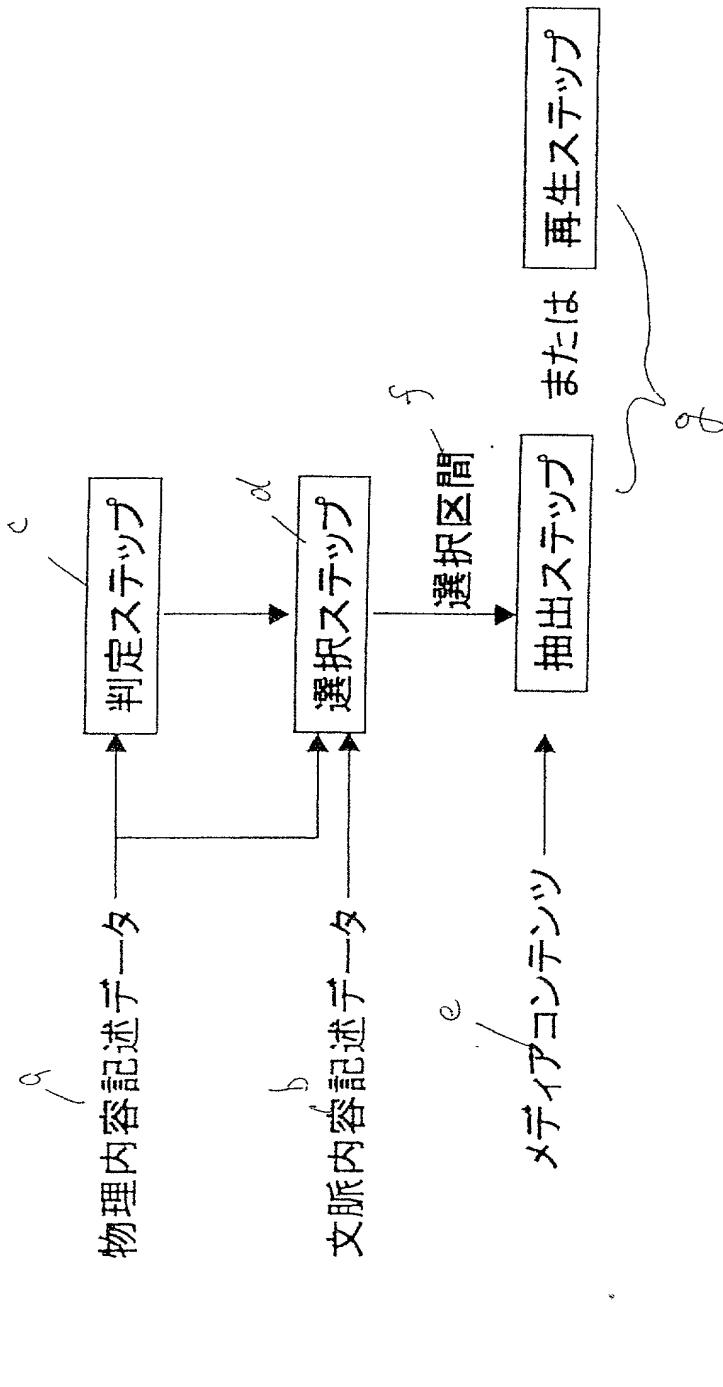
Fig. 100



[FIG. 100]

- a CONTEXT DESCRIPTION DATA PERTAINING TO VIDEO DATA
- b THE VIDEO THE SELECTION STEP
- c SELECTION SEGMENT FOR VIDEO DATA
- d THE EXTRACTION STEP OR THE PLAYBACK STEP
- e CONTEXT DESCRIPTION DATA PERTAINING TO AUDIO DATA
- f THE AUDIO THE SELECTION STEP
- g SELECTION SEGMENT FOR AUDIO DATA

Fig. 101

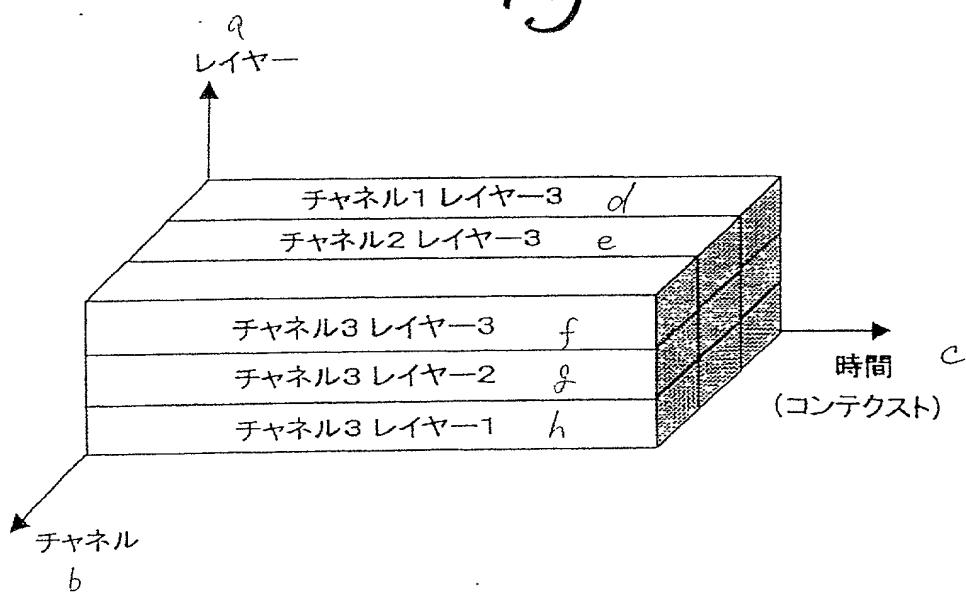


[FIG. 101]

- a PHYSICAL DESCRIPTION DATA
- b CONTEXT DESCRIPTION DATA
- c THE DETERMINATION STEP
- d THE SELECTION STEP
- e MEDIA CONTENT
- f SELECTION SEGMENT
- g THE PLAYBACK STEP

【図102】

Fig. 102



[FIG. 102]

- a LAYER
- b CHANNEL
- c TIME (CONTEXT)
- d CHANNEL-1/LAYER-3
- e CHANNEL-2/LAYER-3
- f CHANNEL-3/LAYER-3
- g CHANNEL-3/LAYER-2
- h CHANNEL-3/LAYER-1

FIG. 103

ONE EXAMPLE OF DTD TO BE USED FOR DESCRIBING CONTEXT DESCRIPTION DATA IN XML

```
<?xml version="1.0"?>

<!ENTITY % types "(audio|video|audiovideo)">
<!ENTITY % formats "(mpeg1-system|mpeg1-video|mpeg-audio|mpeg
2-ps|mpeg2-ts|mpeg2-video)">
<!ELEMENT contents (mediaobject+)
<!ATTLIST contents
  contents-id CDATA #REQUIRED
  title CDATA #REQUIRED
  runtime NMTOKEN #REQUIRED>
<!ELEMENT mediaobject (channel+)
<!ATTLIST mediaobject
  caption CDATA #IMPLIED
  type %types; "audiovideo"
  format %formats; #REQUIRED
  locator CDATA #REQUIRED>
<!ELEMENT channel (pointofview*,grpoflayers?, context)
<!ATTLIST channel
  caption CDATA #IMPLIED
  priority NMTOKEN #REQUIRED>
<!ELEMENT pointofview EMPTY>
<!ATTLIST pointofview
  keyword CDATA #REQUIRED
  priority NMTOKEN #REQUIRED>
<!ELEMENT grpoflayer (layer+)
<!ELEMENT layer EMPTY>
<!ATTLIST layer
  layer-id CDATA #REQUIRED
  priority NMTOKEN #REQUIRED>
<!ELEMENT context EMPTY>
<!ATTLIST context
  Locator CDATA #REQUIRED>
```

ONE EXAMPLE OF XML DOCUMENT RELATING TO CONTEXT DESCRIPTION DATA PREPARED BY DTD

```
<?xml version="1.0" encoding="euc-jp"?>
<!DOCTYPE contents SYSTEM "http://mserv.trl.mei.co.jp/SMML/program05.dtd">

<contents contents-id="urn:upi:mei:12345" title="GRAND SUMO TOUR
NAMENT" runtime="11:42">
  <mediaobject caption="YOKOZUNA" type="audiovideo" format="mpeg
1-system"
    locator="http://mserv.trl.mei.co.jp/MPEG/sumou01.mpg">
    <channel caption="GRAND SUMO TOURNAMENT audiovideo" pri
ority="5">
      <pointofview keyword="audiovideo" priority="5">
```

FIG. 104

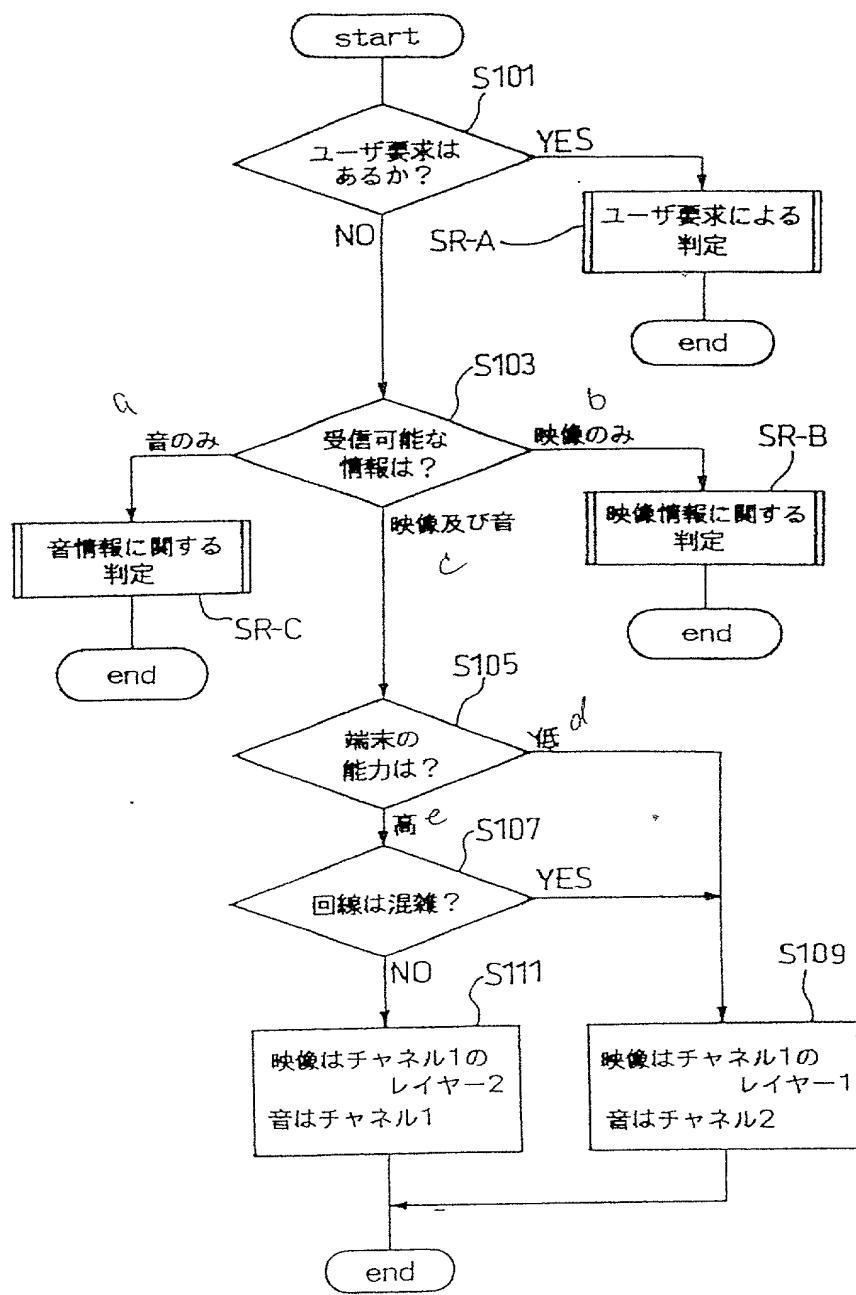
```
<context Locator="http://mserv.trl.mei.co.jp/SMML/sumou01.xml"/>
</channel>
</mediaobject>

<mediaobject caption="YOKOZUNA" type="video" format="mpeg2-video">
  locator="http://mserv.trl.mei.co.jp/MPEG/sumou01v.mpg">
  <channel caption="GRAND SUMO TOURNAMENT video" priority="3">
    <pointofview keyword="video" priority="5">
      <grpoflayers>
        <layer layer-id="video-normal" priority="5"/>
        <layer layer-id="video-high" priority="3"/>
      </grpoflayers>
      <context Locator="http://mserv.trl.mei.co.jp/SMML/sumou01v.xml"/>
    >
    </channel>
  </mediaobject>

  <mediaobject caption="YOKOZUNA" type="audio" format="mpeg-audio">
    locator="http://mserv.trl.mei.co.jp/MPEG/sumou01a.mpg">
    <channel caption="GROUND SUMO TOURNAMENT Japanese" priority="4">
      <pointofview keyword="Japanese" priority="5">
        <context Locator="http://mserv.trl.mei.co.jp/SMML/sumou01as.xml"/>
    >
    </channel>
    <channel caption="GROUND SUMO TOURNAMENT English" priority="3">
      <pointofview keyword="English" priority="5">
        <context Locator="http://mserv.trl.mei.co.jp/SMML/sumou01am.xml"/>
    >
    </channel>
  </mediaobject>
</contents>
```

【図105】

Fig. 105



[FIG. 105]

S101 IS THERE A USER REQUEST?

SR-A DETERMINE USER REQUEST

a ~ SOUND ONLY

SR-B MAKE DETERMINATION RELATING TO SOUND DATA

b ~ VIDEO ONLY

S103 ARE THERE ANY RECEIVABLE DATA?

c ~ VIDEO AND SOUND

S105 IS CAPABILITY OF RECEIVING TERMINAL HIGH OR LOW?

d ~ LOW

e ~ HIGH

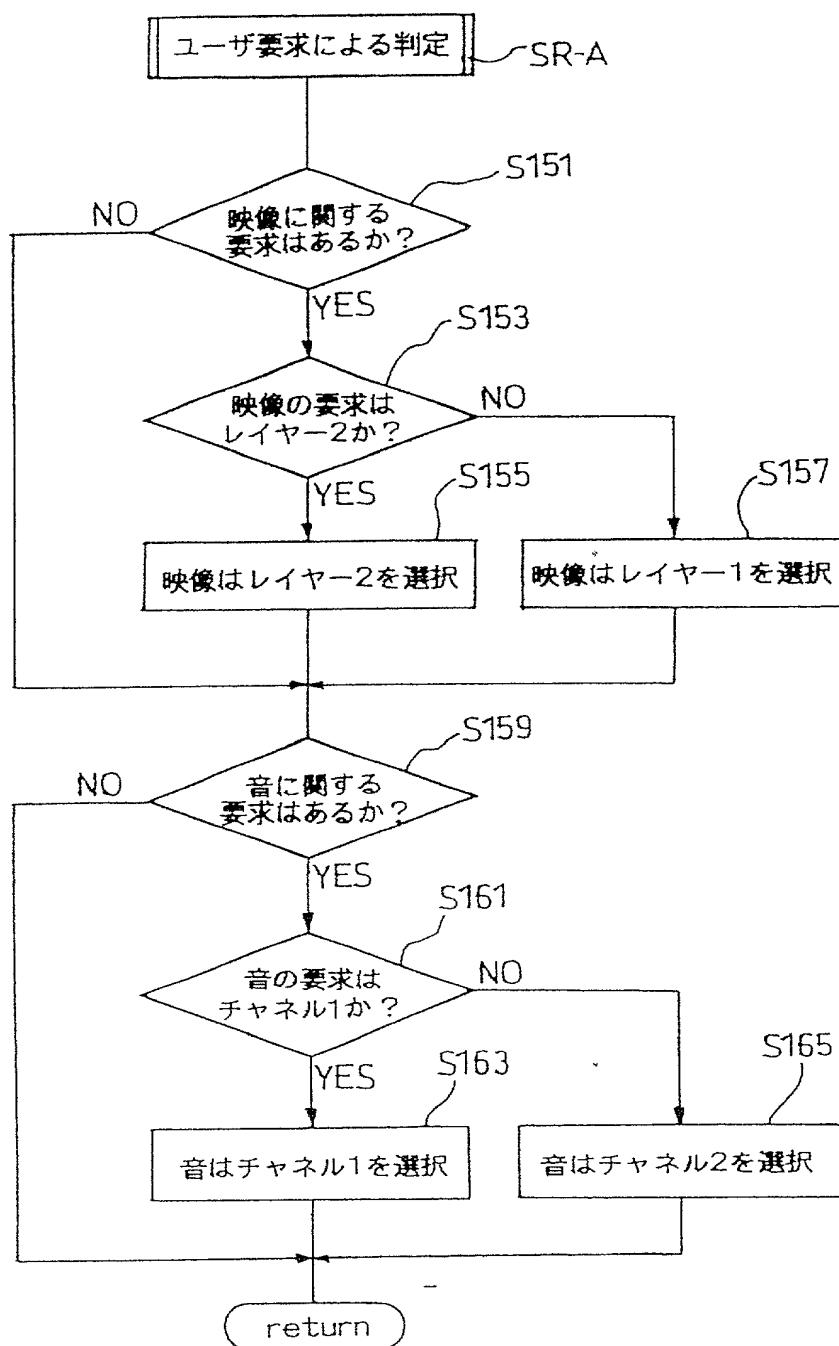
S107 IS TRAFFIC VOLUME OF LINE HIGH OR LOW?

S109 ASSIGN VIDEO DATA TO CHANNEL-1/LAYER-1

ASSIGN AUDIO DATA TO CHANNEL 2

S111 ASSIGN VIDEO DATA TO CHANNEL-1/LAYER-2

ASSIGN AUDIO DATA TO CHANNEL 1



[FIG. 106]

SR-A DETERMINE USER REQUEST

S151 IS THERE REQUEST FOR VIDEO DATA?

S153 DOES REQUEST FOR VIDEO DATA RELATE TO LAYER 2?

S155 SELECT LAYER 2 FOR VIDEO DATA

S157 SELECT LAYER 1 FOR VIDEO DATA

S159 IS THERE REQUEST FOR SOUND?

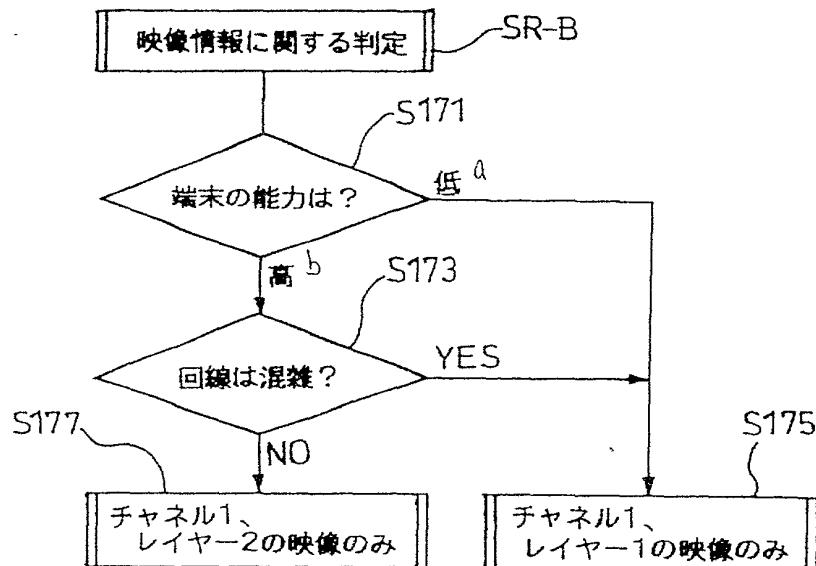
S161 DOES REQUEST FOR SOUND RELATE TO CHANNEL 1?

S163 SELECT CHANNEL 1 FOR SOUND

S165 SELECT CHANNEL 2 FOR SOUND

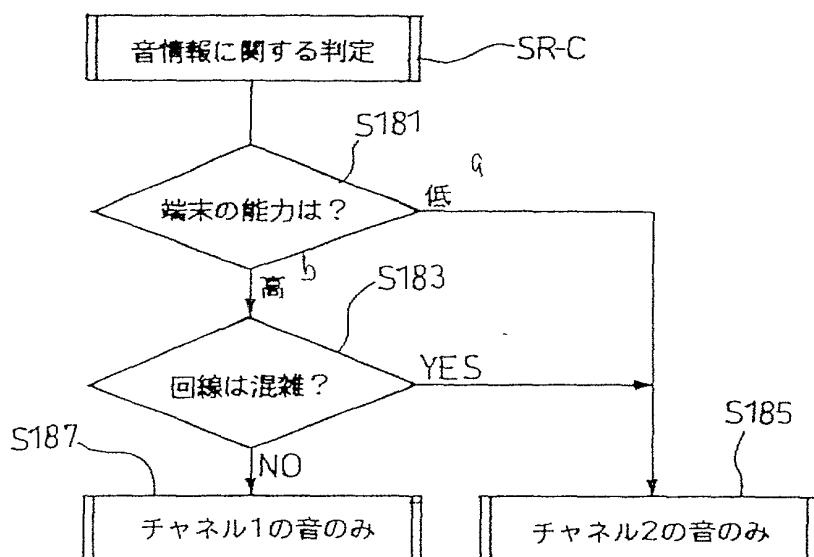
[図107]

Fig. 107



[図108]

Fig. 108



[FIG. 107]

SR-B MAKE DETERMINATION RELATING TO VIDEO DATA

S171 IS CAPABILITY OF RECEIVING TERMINAL HIGH OR LOW?

a - LOW

b - HIGH

S173 IS TRAFFIC VOLUME OF LINE HIGH OR LOW?

S175 SELECT ONLY VIDEO DATA TRANSPORTED OVER CHANNEL-1/LAYER-1

S177 SELECT ONLY VIDEO DATA TRANSPORTED OVER CHANNEL-1/LAYER-2

[FIG. 108]

SR-C MAKE DETERMINATION RELATING TO AUDIO DATA

S181 IS CAPABILITY OF RECEIVING TERMINAL HIGH OR LOW?

a - LOW

b - HIGH

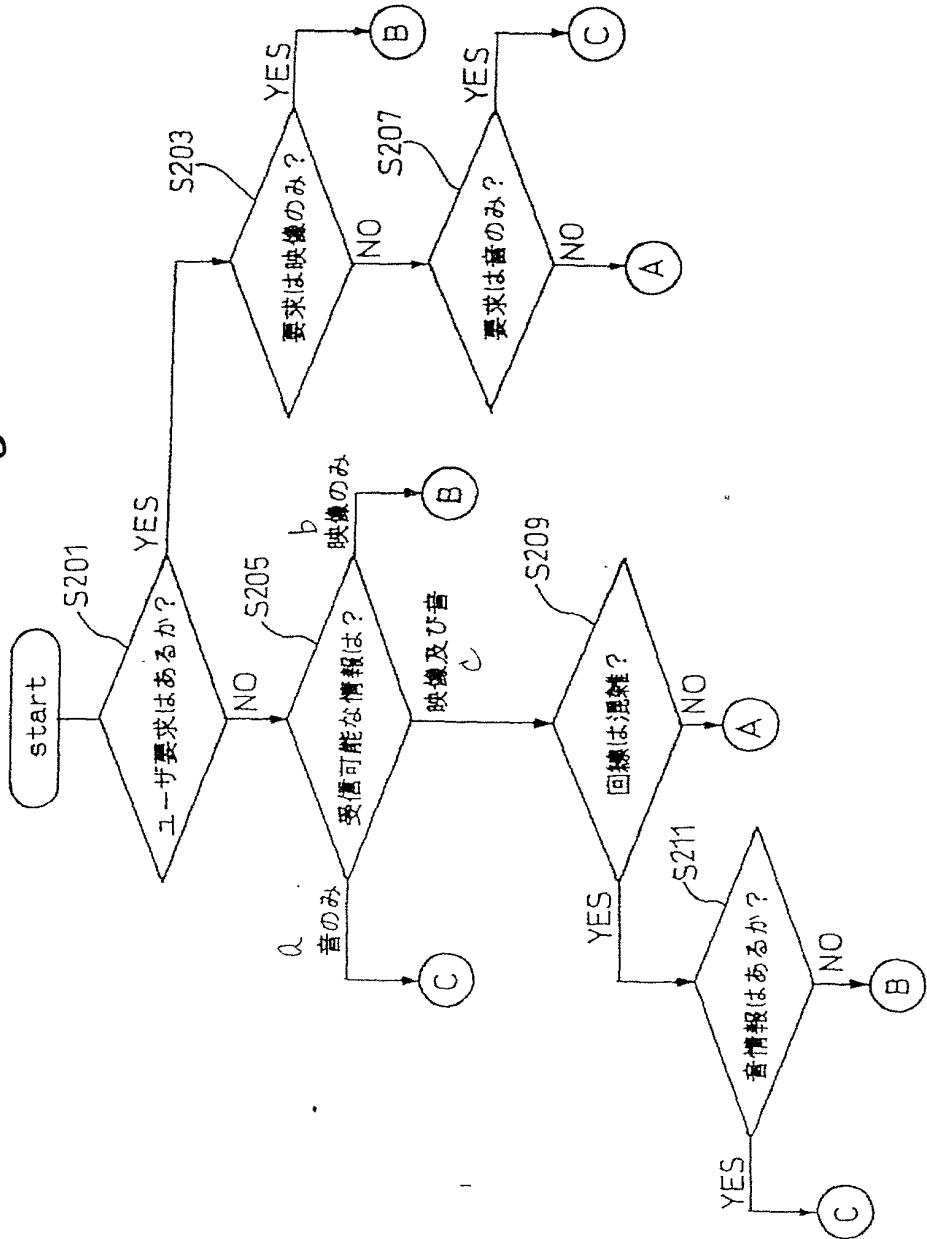
S183 IS TRAFFIC VOLUME OF LINE HIGH OR LOW?

S185 SELECT ONLY AUDIO DATA TRANSPORTED OVER CHANNEL 1

S187 SELECT ONLY AUDIO DATA TRANSPORTED OVER CHANNEL 2

【図109】

Fig. 109



[FIG. 109]

S201 IS THERE USER REQUEST?

S203 IS THERE ONLY REQUEST FOR VIDEO?

S205 ARE THERE ANY RECEIVABLE DATA?

a SOUND ONLY

b VIDEO ONLY

c VIDEO AND SOUND

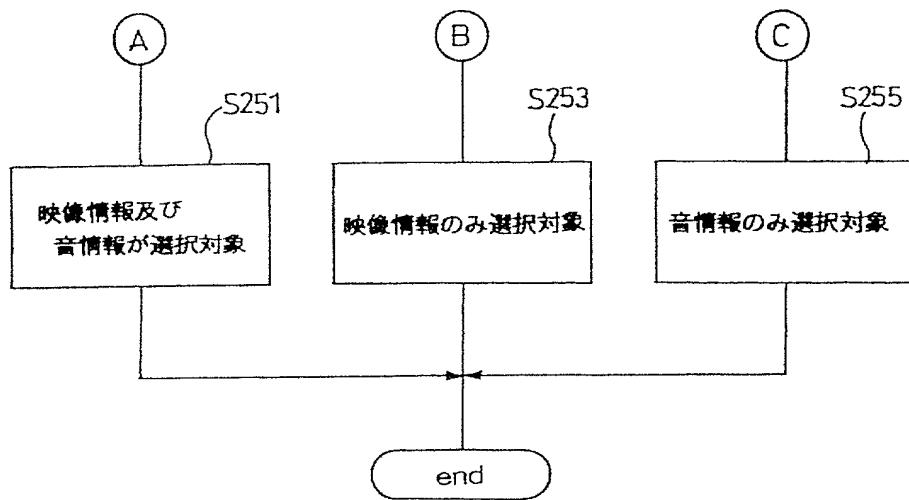
S207 IS THERE ONLY REQUEST FOR SOUND?

S209 IS TRAFFIC VOLUME OF LINE HIGH OR LOW?

S211 ARE THERE SOUND DATA?

【図110】

Fig. 110



[FIG. 110]

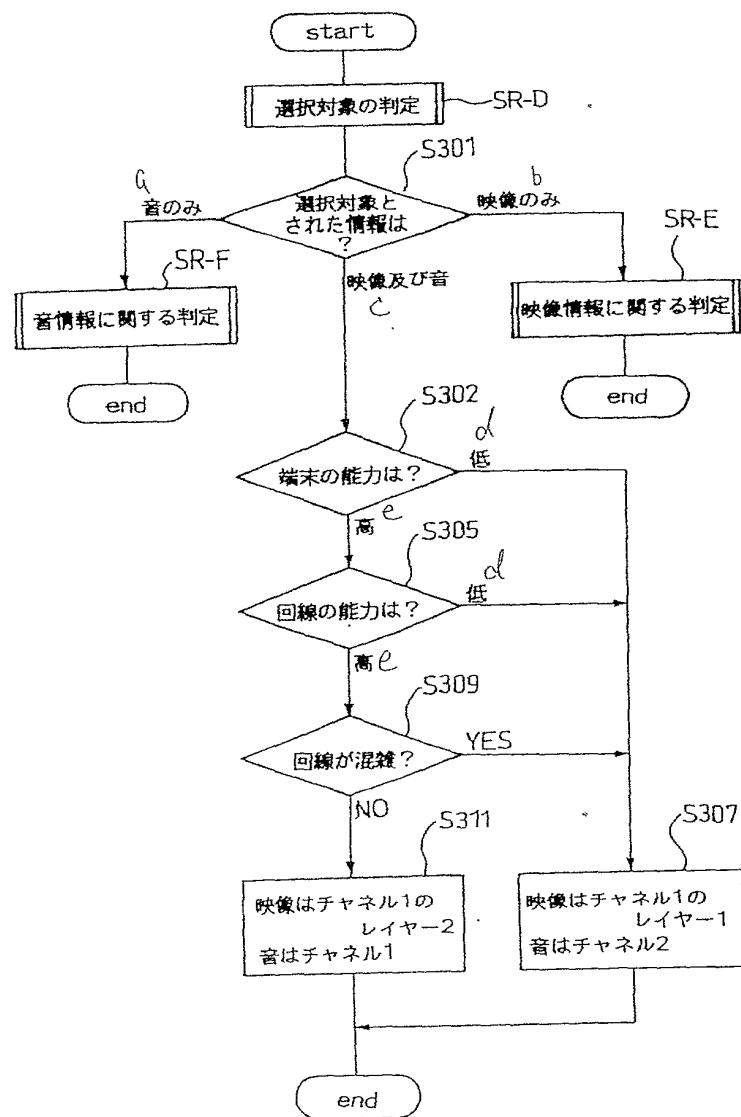
S251 VIDEO AND SOUND DATA ARE OBJECTS OF SELECTION

S253 ONLY VIDEO DATA ARE OBJECTS OF SELECTION

S255 ONLY AUDIO DATA ARE OBJECTS OF SELECTION

[図111]

Fig. 111



[FIG. 111]

SR-D DETERMINE OBJECT OF SELECTION

S301 ARE THERE DATA DETERMINED TO BE OBJECTS OF SELECTION?

a - SOUND ONLY

b - VIDEO ONLY

c - VIDEO AND SOUND

SR-F MAKE DETERMINATION RELATING TO SOUND DATA

SR-E MAKE DETERMINATION RELATING TO VIDEO DATA

S302 IS CAPABILITY OF RECEIVING TERMINAL HAVE HIGH OR LOW?

e - HIGH

d - LOW

S302 IS CAPABILITY OF LINE HIGH OR LOW?

e - HIGH

d - LOW

S309 IS TRAFFIC VOLUME OF LINE HIGH OR LOW?

S307 SELECT VIDEO DATA TRANSPORTED OVER CHANNEL-1/LAYER-1

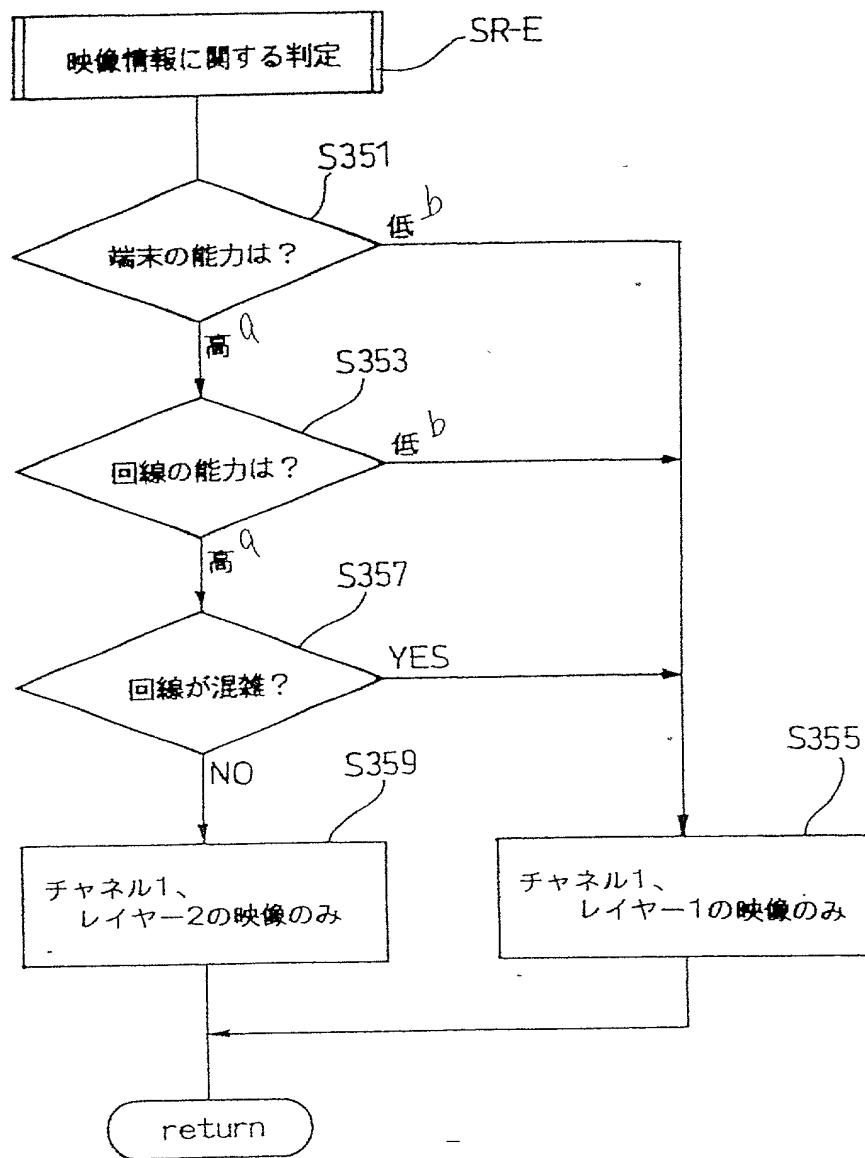
SELECT SOUND DATA TRANSPORTED OVER CHANNEL 1

S311 SELECT VIDEO DATA TRANSPORTED OVER CHANNEL-1/LAYER-2

SELECT SOUND DATA TRANSPORTED OVER CHANNEL 2

[図112]

Fig. 112



[FIG. 112]

SR-E MAKE DETERMINATION RELATING TO VIDEO DATA

S351 IS CAPABILITY OF RECEIVING TERMINAL HIGH OR LOW?

a HIGH

b LOW

S353 IS CAPABILITY OF LINE HIGH OR LOW?

a HIGH

b LOW

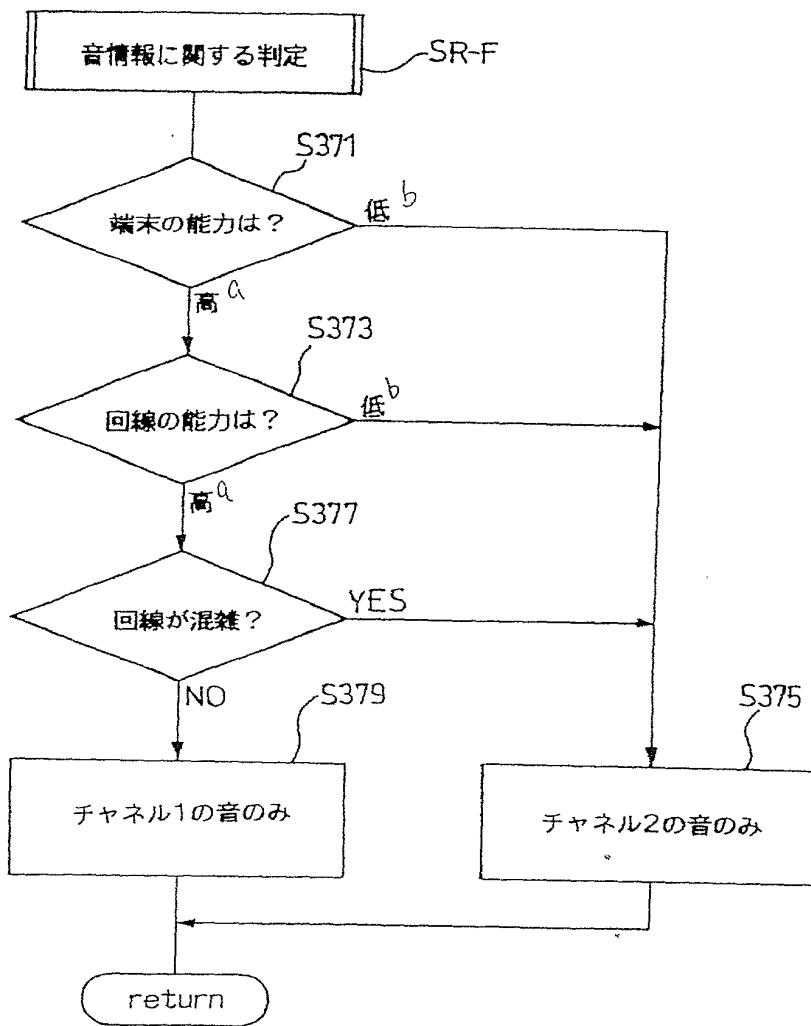
S357 IS TRAFFIC VOLUME OF LINE HIGH ~~LOW~~?

S355 SELECT ONLY VIDEO DATA TRANSPORTED OVER CHANNEL-1/LAYER-1

S359 SELECT ONLY VIDEO DATA TRANSPORTED OVER CHANNEL-1/LAYER-2

【図113】

Fig. 113



[FIG. 113]

SR-F MAKE DETERMINATION RELATING TO SOUND DATA

S371 IS CAPABILITY OF RECEIVING TERMINAL HAVE HIGH OR LOW?

a - HIGH

b - LOW

S373 IS CAPABILITY OF LINE HIGH OR LOW?

a - HIGH

b - LOW

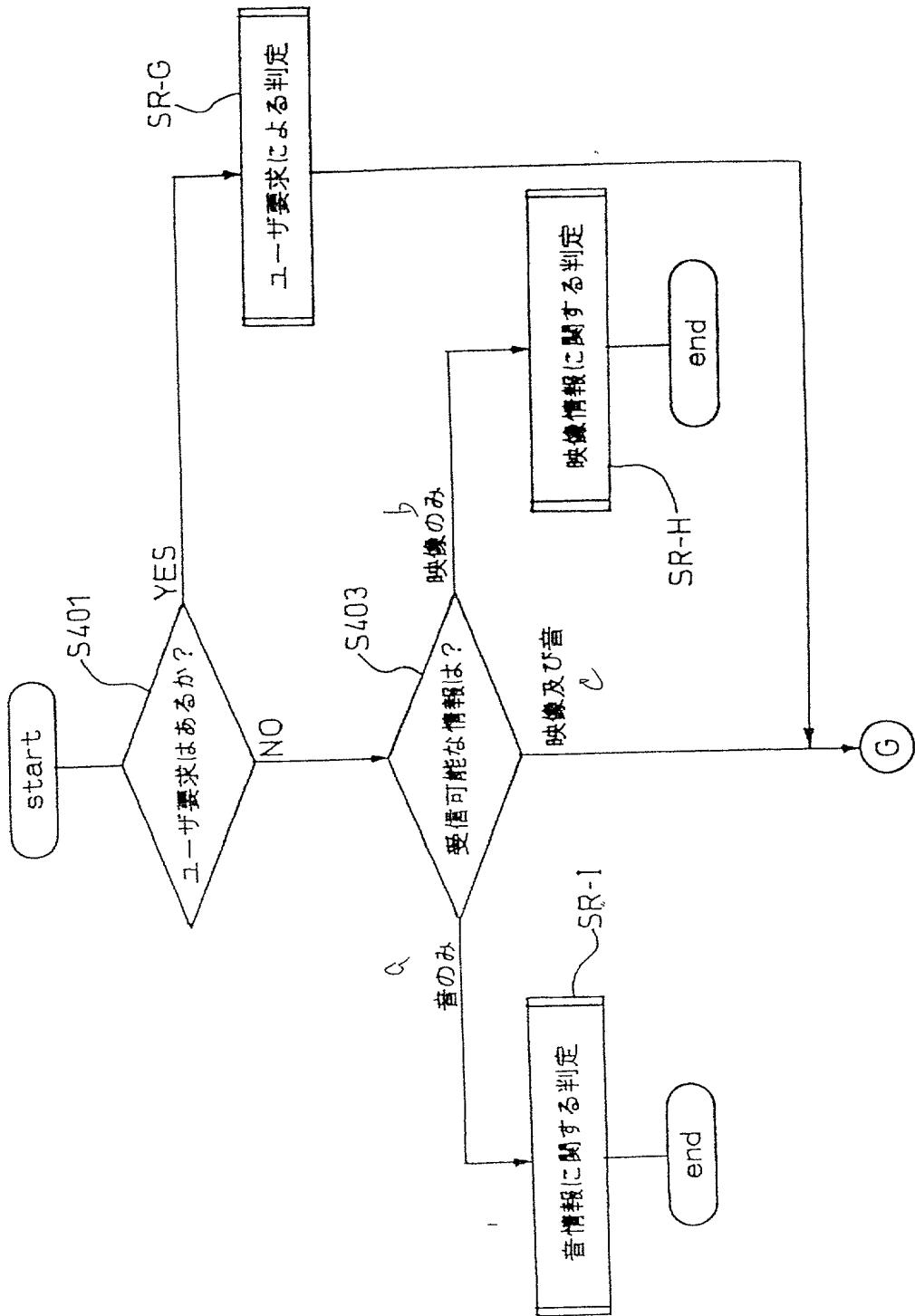
S377 IS TRAFFIC VOLUME OF LINE HIGH OR LOW?

S375 SELECT ONLY AUDIO DATA TRANSPORTED OVER CHANNEL 2

S379 SELECT ONLY AUDIO DATA TRANSPORTED OVER CHANNEL 1

【図114】

Fig. 114



[FIG. 114]

S401 IS THERE USER REQUEST?

SR-G DETERMINE USER REQUEST

S403 ARE THERE ANY RECEIVABLE DATA?

a SOUND ONLY

b VIDEO ONLY

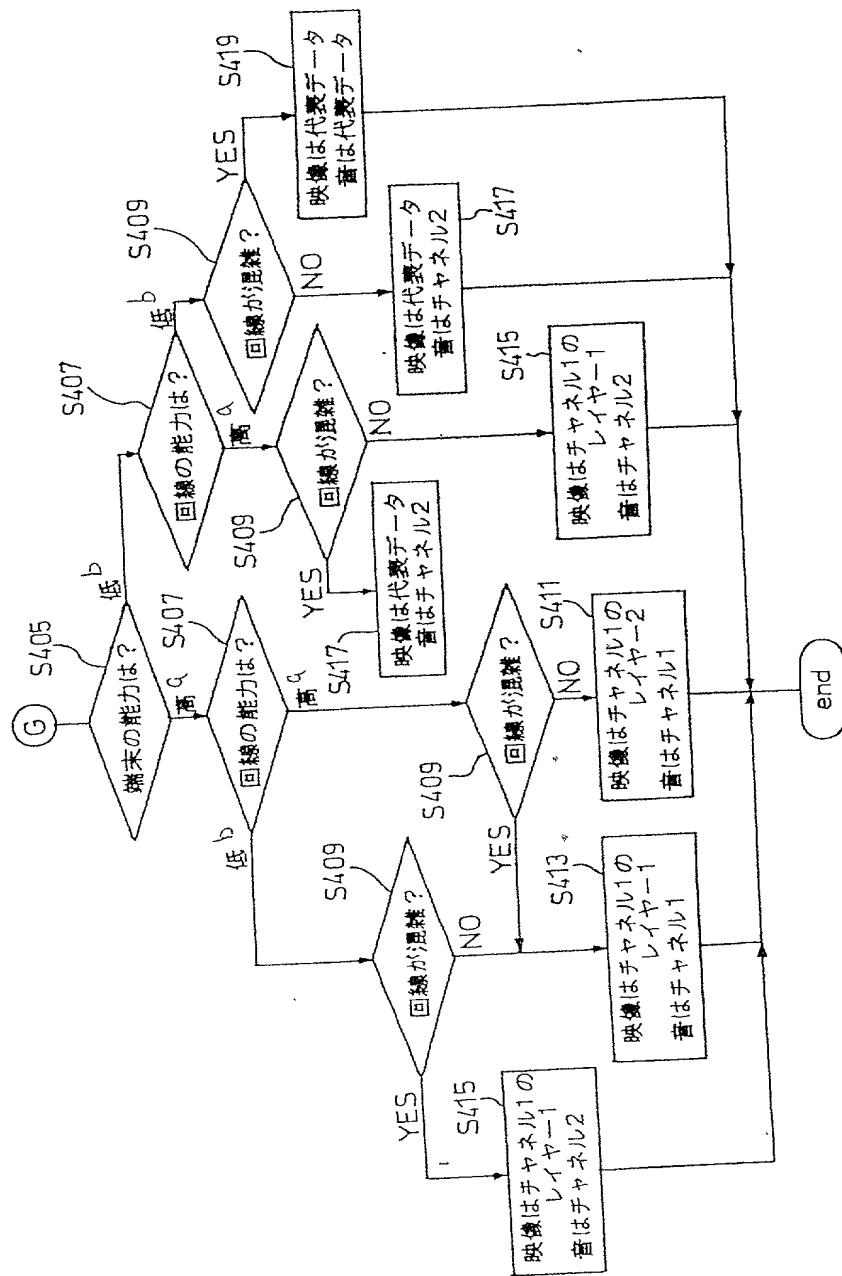
c VIDEO AND SOUND

SR-I MAKE DETERMINATION RELATING TO SOUND DATA

SR-H MAKE DETERMINATION RELATING TO AUDIO DATA

[図115]

Fig. 115



[FIG. 115]

S405 IS CAPABILITY OF RECEIVING TERMINAL HIGH OR LOW?

Q HIGH

b LOW

S407 IS CAPABILITY OF LINE HIGH OR LOW?

q HIGH

h low

S409 IS TRAFFIC VOLUME OF LINE HIGH OR LOW?

S411 SELECT VIDEO DATA TRANSPORTED OVER CHANNEL-1/LAYER-2

SELECT SOUND DATA TRANSPORTED OVER CHANNEL 1

S413 SELECT VIDEO DATA TRANSPORTED OVER CHANNEL-1/LAYER-1

SELECT SOUND DATA TRANSPORTED OVER CHANNEL 1

S415 SELECT VIDEO DATA TRANSPORTED OVER CHANNEL-1/LAYER-1

SELECT SOUND DATA TRANSPORTED OVER CHANNEL 2

S417 SELECT REPRESENTATIVE VIDEO DATA

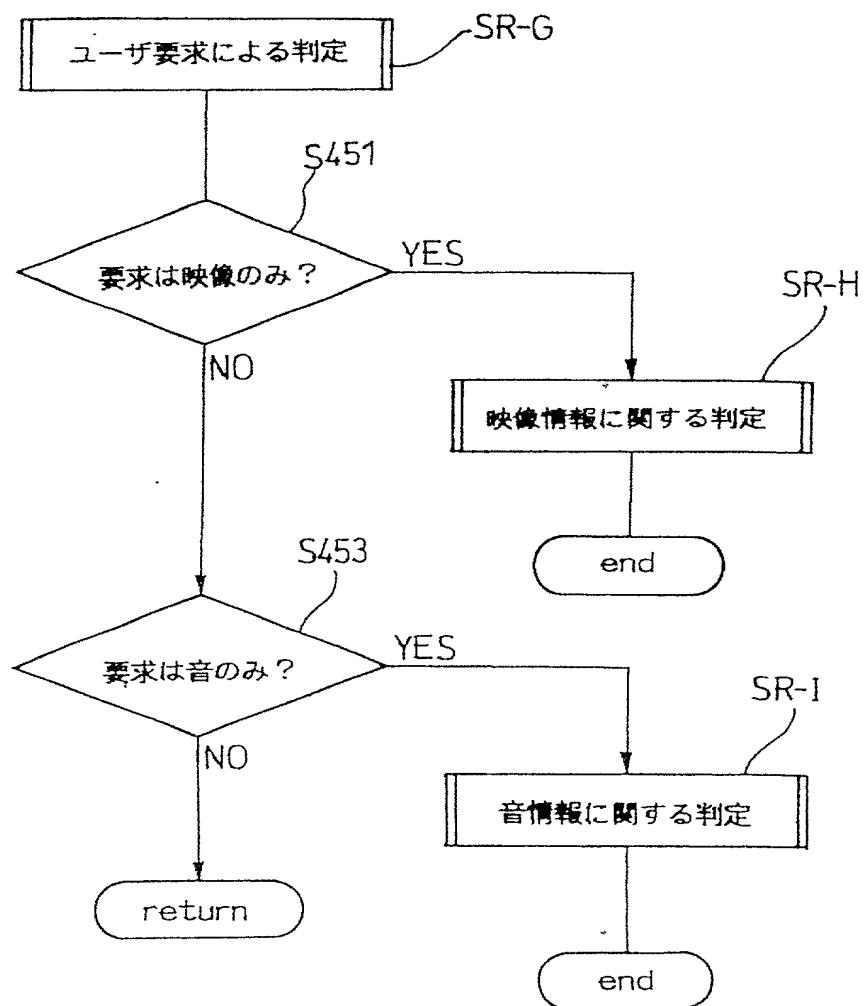
SELECT SOUND DATA TRANSPORTED OVER CHANNEL 2

SELECT SOUND DATA TRANSPORTED ON THE
S-VIDEO SELECT REPRESENTATIVE VIDEO DATA

SELECT REPRESENTATIVE VIDEO DATA

【図116】

Fig. 116



[FIG. 116]

SR-G DETERMINE USER REQUEST

S451 IS THERE ONLY REQUEST FOR VIDEO DATA?

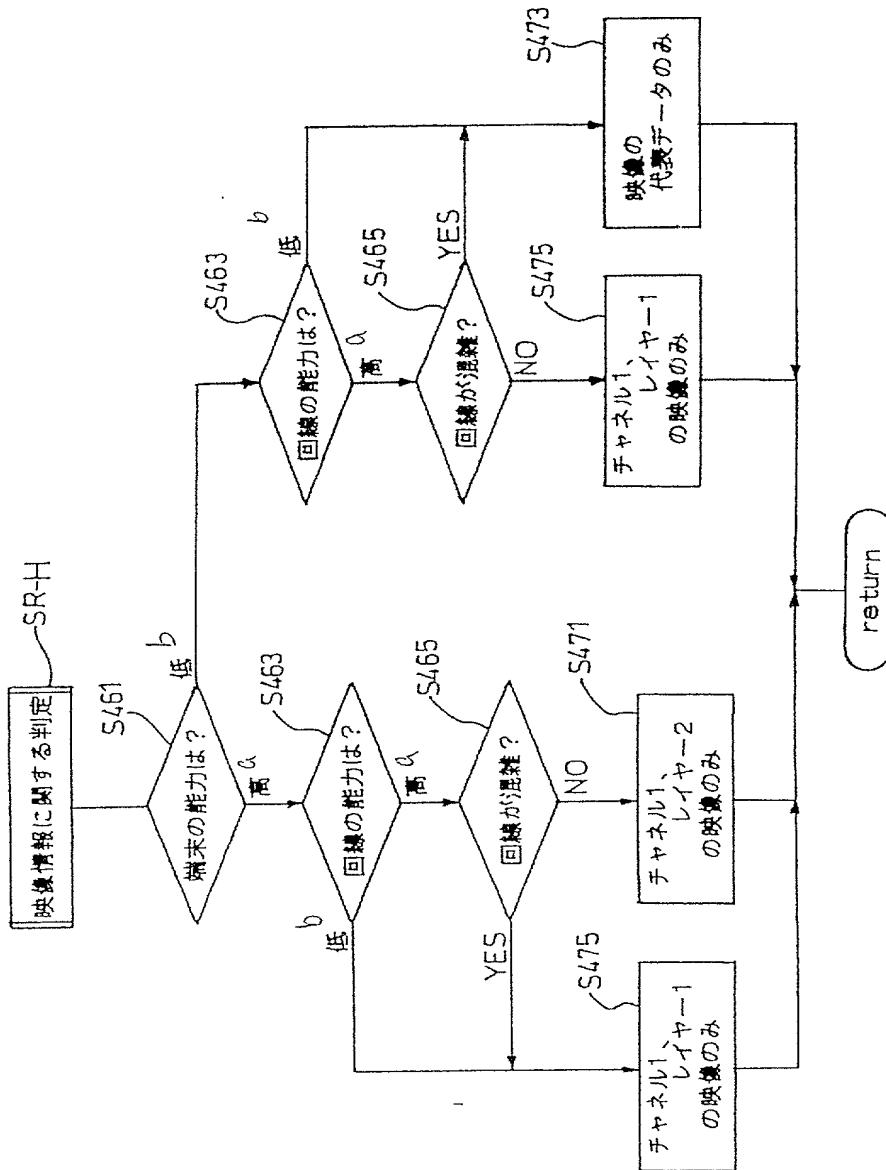
SR-H MAKE DETERMINATION RELATING TO VIDEO DATA

S453 IS THERE ONLY REQUEST FOR AUDIO DATA?

SR-I MAKE DETERMINATION RELATING TO AUDIO DATA

【図117】

Fig. 117



[FIG. 117]

SR-H MAKE DETERMINATION RELATING TO VIDEO DATA

S461 IS CAPABILITY OF RECEIVING TERMINAL HIGH OR LOW?

HIGH

LOW

S463 IS CAPABILITY OF LINE HIGH OR LOW?

HIGH

LOW

S465 DOES LINE HAVE HIGH TRAFFIC VOLUME?

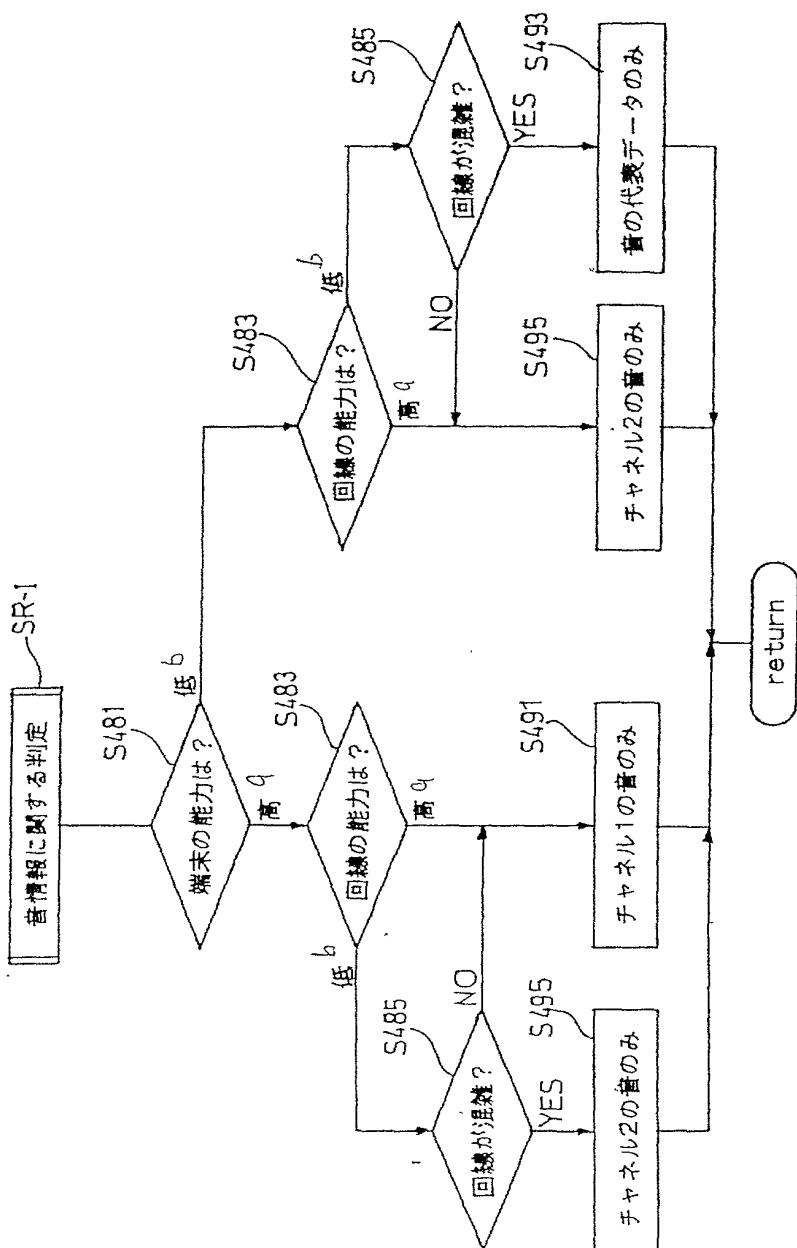
S471 SELECT ONLY VIDEO DATA TRANSPORTED OVER CHANNEL-1/LAYER-2

S473 SELECT REPRESENTATIVE VIDEO DATA

S475 SELECT VIDEO DATA TRANSPORTED OVER CHANNEL-1/LAYER-1

【図118】

Fig. 118



[FIG. 118]

SR-I MAKE DETERMINATION RELATING TO AUDIO DATA

S481 IS CAPABILITY OF RECEIVING TERMINAL HIGH OR LOW?

q HIGH

b LOW

S483 IS CAPABILITY OF LINE HIGH OR LOW?

q HIGH

b LOW

S485 DOES LINE HAVE HIGH TRAFFIC VOLUME?

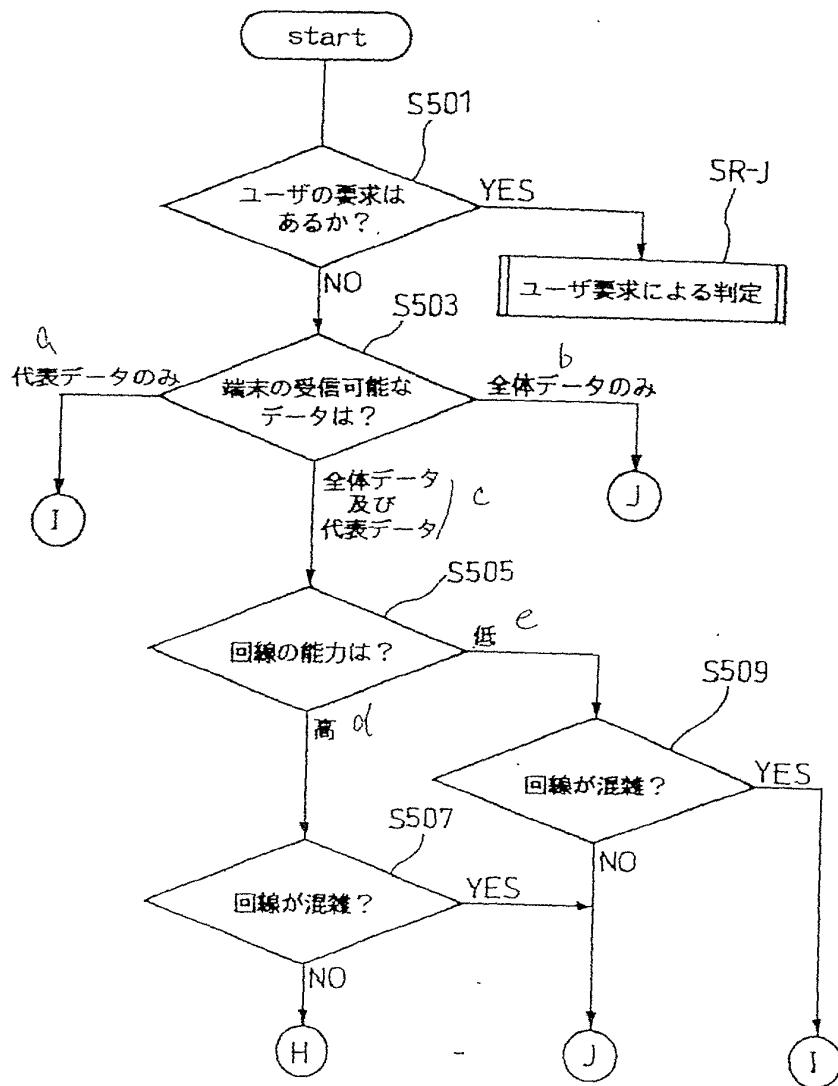
S491 SELECT ONLY AUDIO DATA TRANSPORTED OVER CHANNEL 1

S493 SELECT REPRESENTATIVE AUDIO DATA

S495 SELECT AUDIO DATA TRANSPORTED OVER CHANNEL 2

[図119]

Fig. 119



[FIG. 119]

S501 IS THERE USER REQUEST?

SR-J DETERMINE USER REQUEST

S503 ARE THERE ANY RECEIVABLE DATA?

a) REPRESENTATIVE DATA ONLY

b) ENTIRE DATA ONLY

c) ENTIRE DATA AND REPRESENTATIVE DATA

S505 IS CAPABILITY OF LINE HIGH OR LOW?

d) HIGH

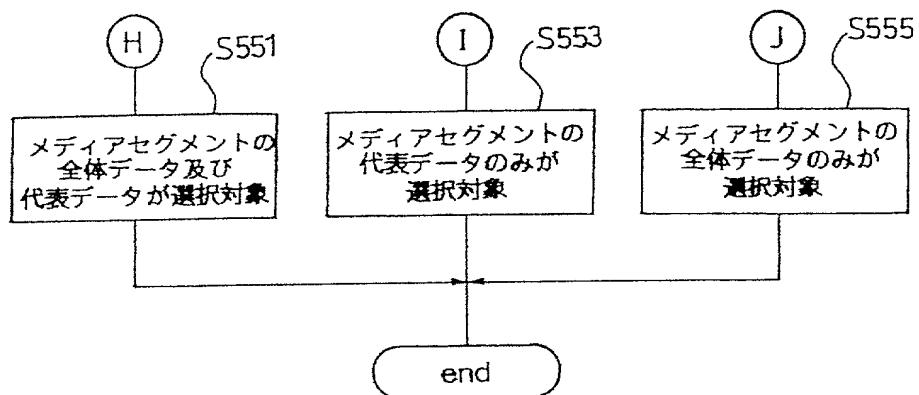
e) LOW

S507 DOES LINE HAVE HIGH TRAFFIC VOLUME?

S509 DOES LINE HAVE HIGH TRAFFIC VOLUME?

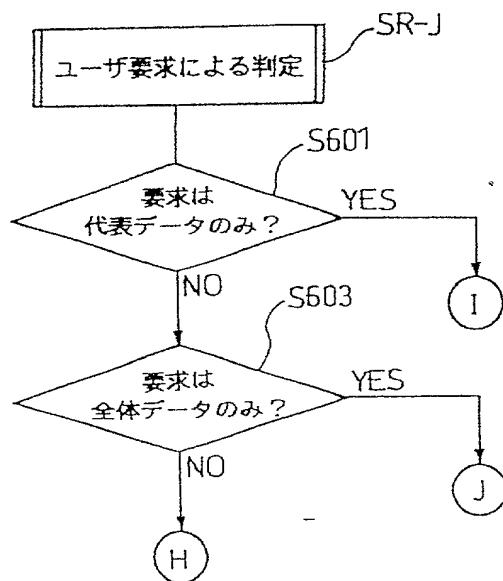
【図120】

Fig. 120



【図121】

Fig. 121



[FIG. 120]

S551 ENTIRE DATA AND REPRESENTATIVE DATA PERTAINING TO MEDIA SEGMENT ARE OBJECTS

OF SELECTION

S553 ONLY REPRESENTATIVE DATA PERTAINING TO MEDIA SEGMENT ARE OBJECTS OF

SELECTION

S555 ONLY ENTIRE DATA PERTAINING TO MEDIA SEGMENT ARE OBJECTS OF SELECTION

[FIG. 121]

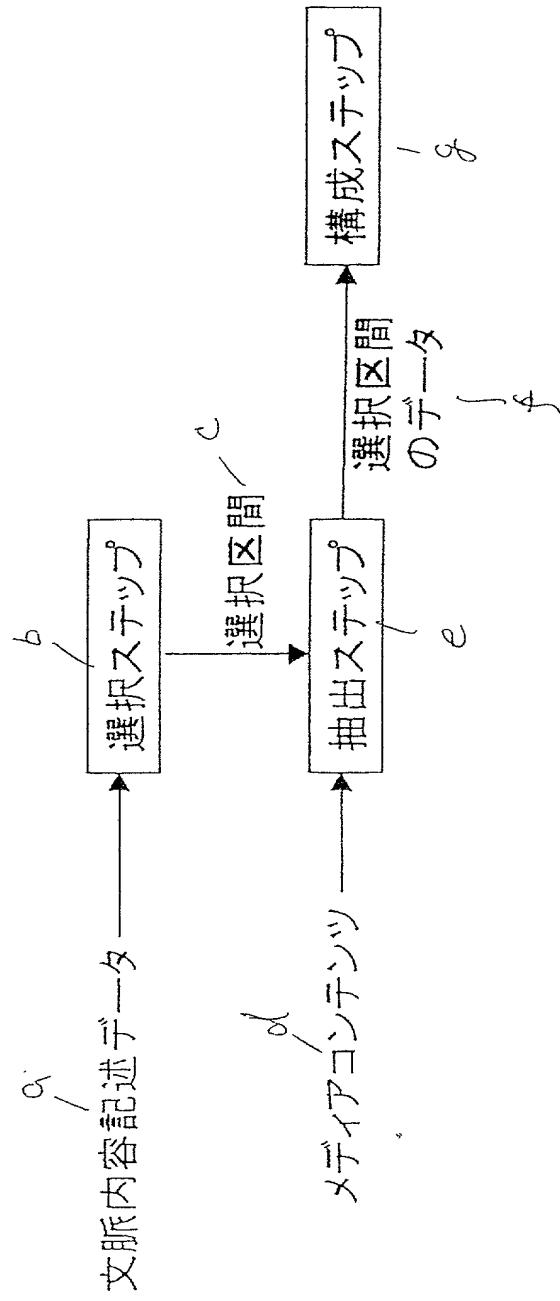
SR-J DETERMINE USER REQUEST

S601 DOES THE REQUEST RELATE TO ONLY REPRESENTATIVE DATA?

S603 DOES THE REQUEST RELATE TO ONLY ENTIRE DATA?

【図 122】

Fig. 122



[FIG. 122]

- q CONTEXT DESCRIPTION DATA
- b THE SELECTION STEP
- c SELECTION SEGMENT
- d MEDIA CONTENT
- e THE EXTRACTION STEP
- f DATA PERTAINING TO SELECTION SEGMENT
- g THE FORMATION STEP

【図 123】

Fig. 123

[FIG. 123]

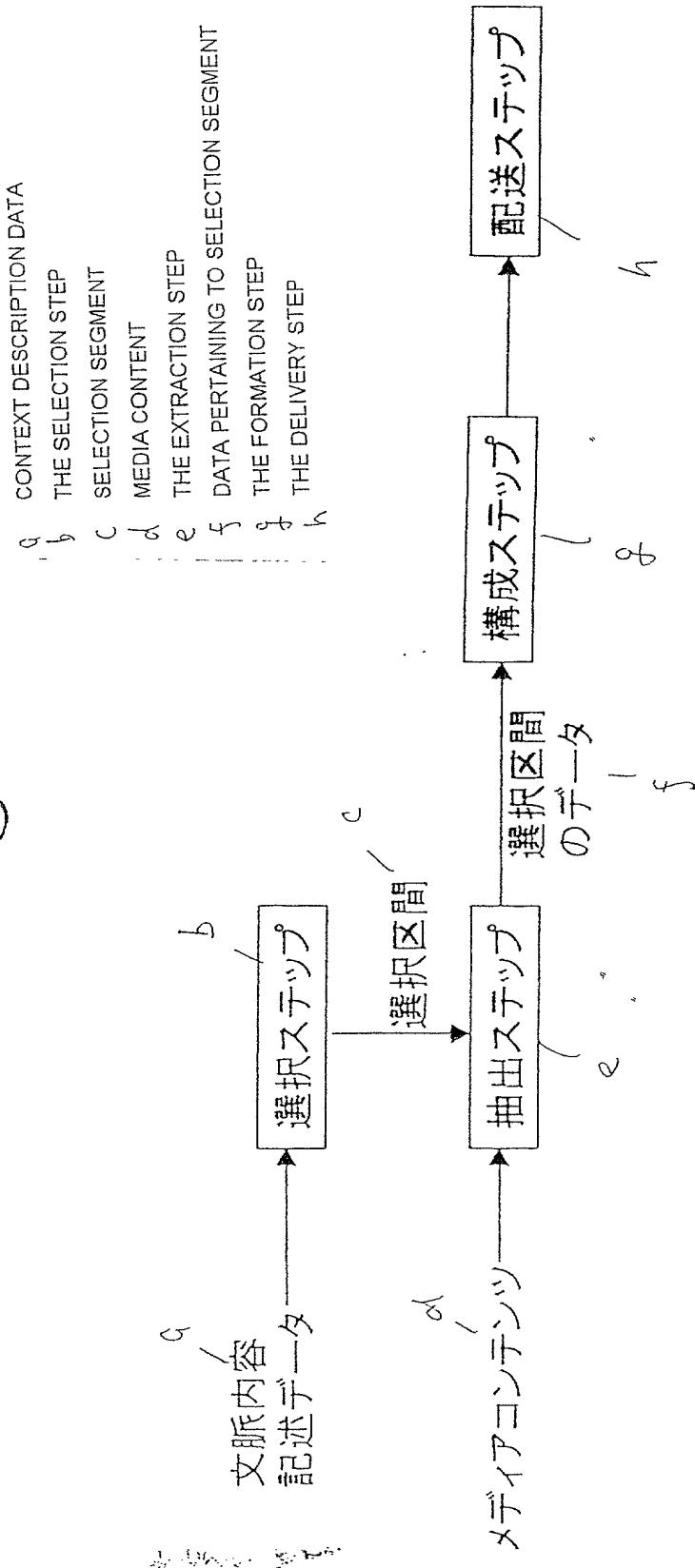
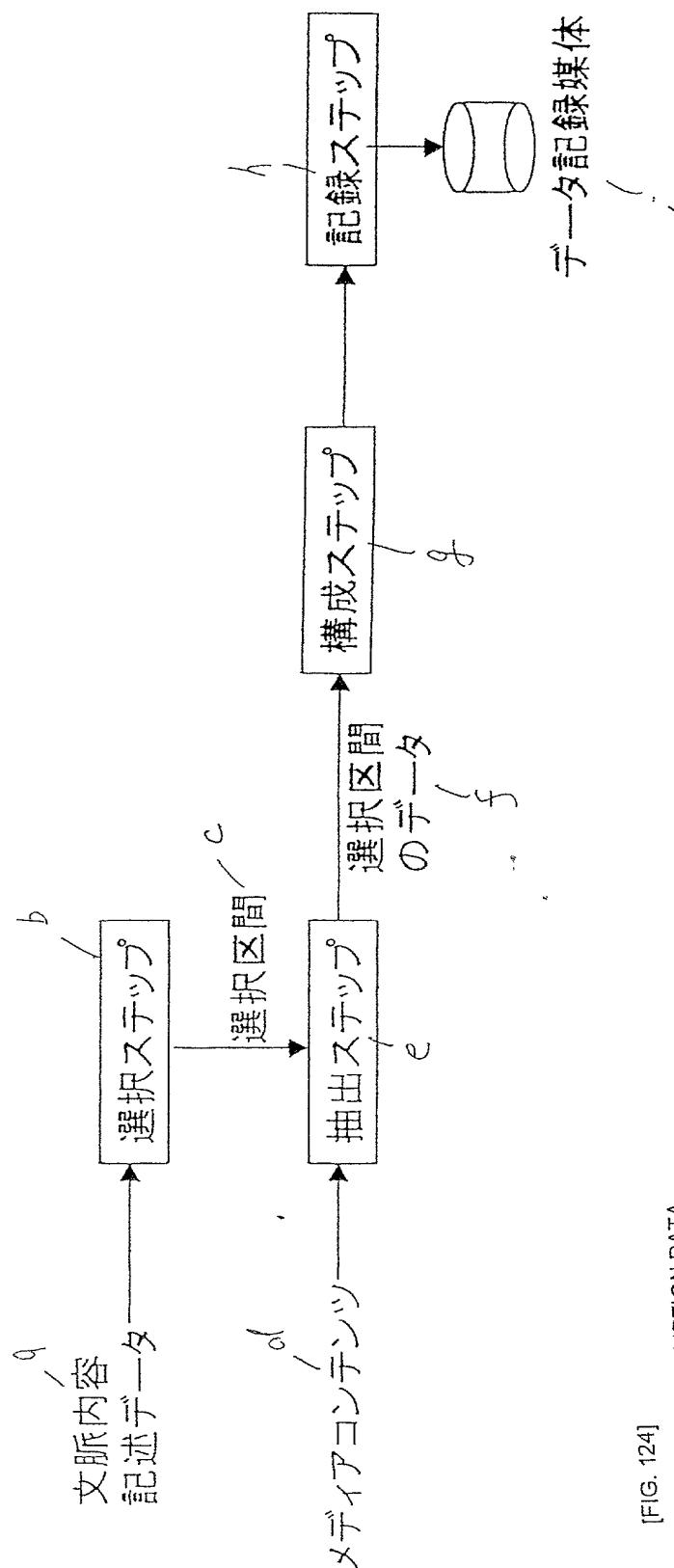


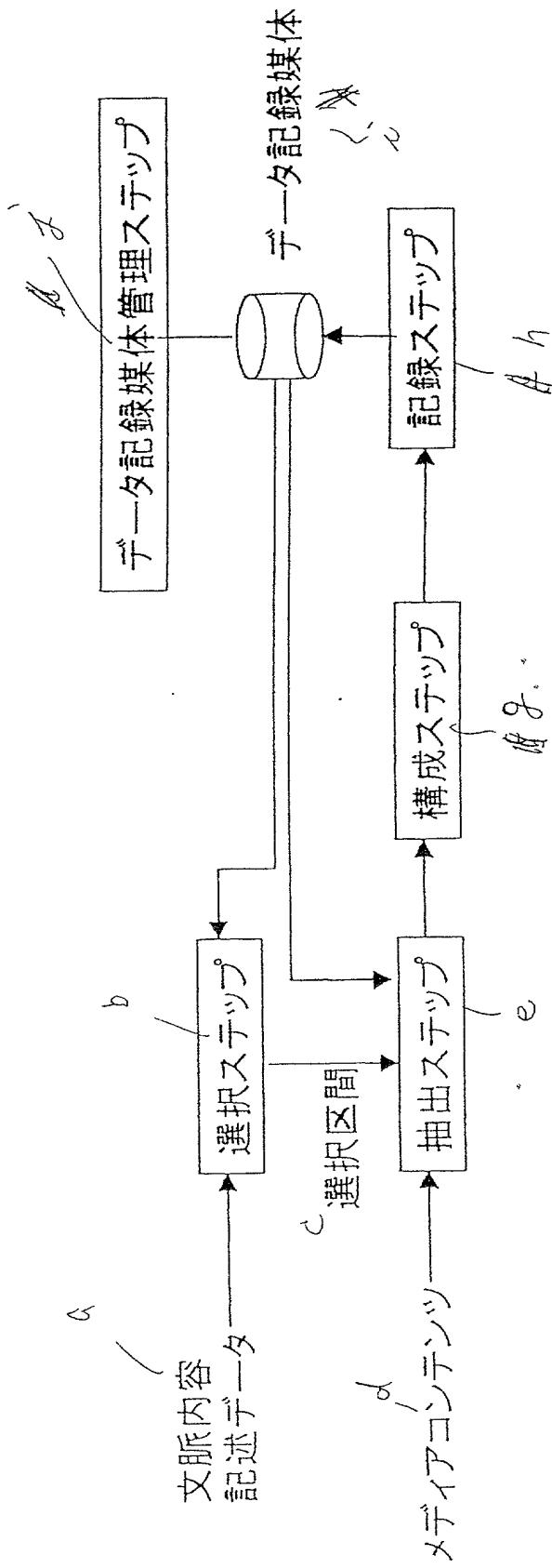
Fig. 124



[FIG. 124]

- a CONTEXT DESCRIPTION DATA
- b THE SELECTION STEP
- c SELECTION INTERVAL
- d MEDIA CONTENT
- e THE EXTRACTION STEP
- f DATA PERTAINING TO SELECTION SEGMENT
- g THE FORMATION STEP
- h RECORDING STEP
- i DATA RECORDING MEDIUM

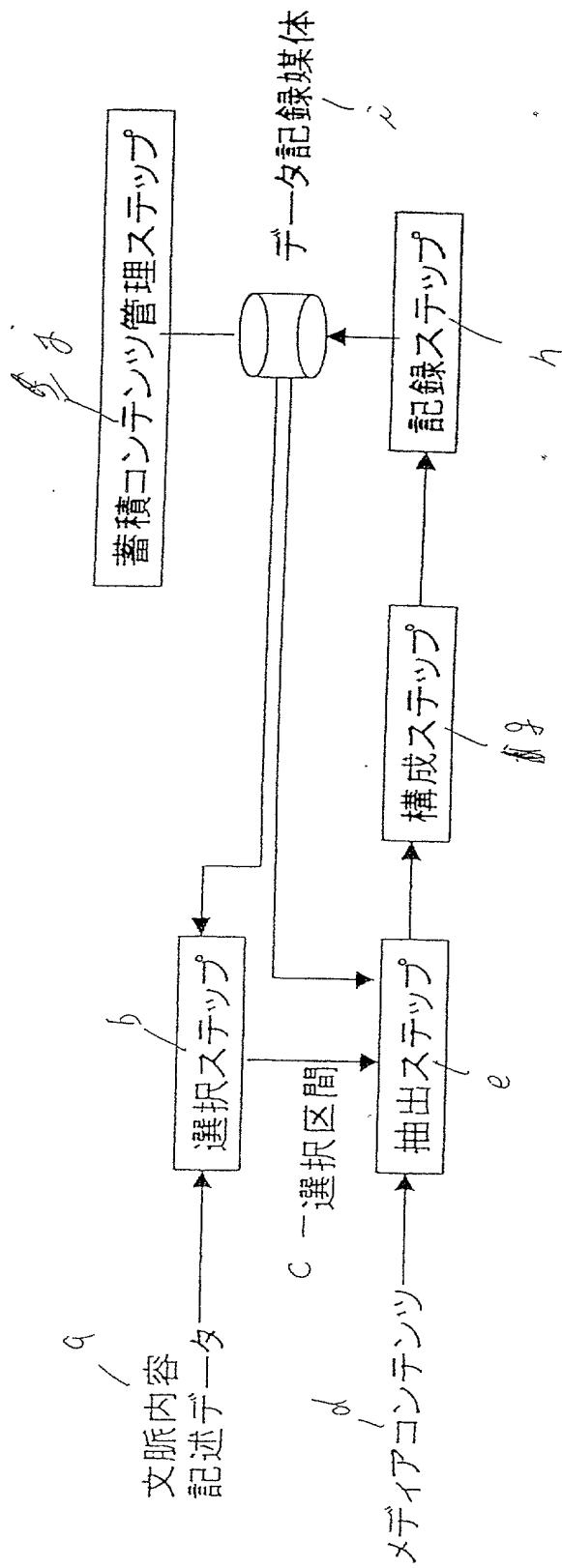
Fig. 125



[FIG. 125]

- g CONTEXT DESCRIPTION DATA
- h THE SELECTION STEP
- c SELECTION SEGMENT
- d MEDIA CONTENT
- e THE EXTRACTION STEP
- f DATA PERTAINING TO SELECTION SEGMENT
- g THE FORMATION STEP
- h RECORDING STEP
- i DATA RECORDING MEDIUM
- j DATA RECORDING MEDIUM MANAGEMENT STEP

Fig. 126



[FIG. 126]

- a CONTEXT DESCRIPTION DATA
- b THE SELECTION STEP
- c SELECTION SEGMENT
- d MEDIA CONTENT
- e THE EXTRACTION STEP
- f DATA PERTAINING TO SELECTION SEGMENT
- g THE FORMATION STEP
- h RECORDING STEP
- i DATA RECORDING MEDIUM
- j DATA RECORDING MEDIUM MANAGEMENT STEP
- k READING STEP
- l DATA READING MEDIUM
- m DATA READING MEDIUM MANAGEMENT STEP

FIG. 127

DTD TO BE USED FOR DESCRIBING, IN XML, ONE EXAMPLE OF DATA INTO WHICH CONTEXT DESCRIPTION DATA AND STRUCTURE DESCRIPTION DATA ARE MERGED

<?xml version="1.0"?>

```
<!ENTITY % types "(audio|video|audiovideo)">
<!ENTITY % formats "(mpeg1-system|mpeg1-video|mpeg-audio|mpeg
2-ps|mpeg2-ts|mpeg2-video)">
<!ELEMENT contents (mediaobject+)
<!ATTLIST contents contents-id CDATA #REQUIRED
          title CDATA #REQUIRED
          runtime NMTOKEN #REQUIRED>
<!ELEMENT mediaobject (channel+)
<!ATTLIST mediaobject caption CDATA #IMPLIED
          type %types; "audiovideo"
          format %formats; #REQUIRED
          seq NMTOKEN #REQUIRED
          locator CDATA #REQUIRED>
<!ELEMENT channel (pointofview*,grpoflayers?, context)
<!ATTLIST channel caption CDATA #IMPLIED
          priority NMTOKEN #REQUIRED>
<!ELEMENT pointofview EMPTY>
<!ATTLIST pointofview keyword CDATA #REQUIRED
          priority NMTOKEN #REQUIRED>
<!ELEMENT grpoflayer (layer+)
<!ELEMENT layer EMPTY>
<!ATTLIST layer layer-id CDATA #REQUIRED
          priority NMTOKEN #REQUIRED>
<!ELEMENT context (section+)
<!ELEMENT section (section+|segment+)
<!ATTLIST section caption CDATA #IMPLIED
          priority NMTOKEN #REQUIRED>
<!ELEMENT segment EMPTY>
<!ATTLIST segment start CDATA #REQUIRED
          end CDATA #REQUIRED
          priority NMTOKEN #REQUIRED>
```

ONE EXAMPLE OF XML DOCUMENT INTO WHICH CONTEXT DESCRIPTION DATA AND PHYSICAL DESCRIPTION DATA ARE MERGED BY MEANS OF DTD

```
<?xml version="1.0" encoding="euc-jp"?>
<!DOCTYPE contents SYSTEM "http://mserv.trl.mei.co.jp/SMML/program05.dtd">
```

FIG. 128

```
<contents contents-id="urn:upi:mei:12345" title="GROUND SUMO TOURNAMENT" runtime="11:42">
  <mediaobject caption="YOKOZUNA" type="audiovideo" format="mpeg 1-system">
    <seq="1" locator="sumou01.mpg">
      <channel caption="GROUND SUMO TOURNAMENT audiovideo" priority="5">
        <pointofview keyword="audiovideo" priority="5">
          <context>
            <section caption="SUMO WRESTLER0 VS. SUMO WRESTLER1" priority="5">
              <section priority="1">
                <segment start="smpte=00:00:00:00" end="smpte=00:00:04:17" priority="1"/>
                <segment start="smpte=00:00:04:18" end="smpte=00:00:09:08" priority="1"/>
              </section>
              <section priority="2">
                <segment start="smpte=00:00:09:09" end="smpte=00:00:14:13" priority="2"/>
              </section>
              <section priority="3">
                <segment start="smpte=00:00:14:14" end="smpte=00:00:19:19" priority="3"/>
              </section>
              <section priority="1">
                <segment start="smpte=00:00:19:20" end="smpte=00:00:22:10" priority="1"/>
              </section>
              <section priority="3">
                <segment start="smpte=00:00:22:20" end="smpte=00:00:28:09" priority="3"/>
                <segment start="smpte=00:00:28:11" end="smpte=00:00:33:11" priority="3"/>
                <segment start="smpte=00:00:30:29" end="smpte=00:00:43:12" priority="3"/>
              </section>
              <section priority="2">
                <segment start="smpte=00:00:43:12" end="smpte=00:00:46:21" priority="2"/>
              </section>
              <section priority="3">
                <segment start="smpte=00:00:46:21" end="smpte=00:00:57:09" priority="3"/>
              </section>
            </section>
          </context>
        </pointofview>
      </channel>
    </seq>
  </mediaobject>
</contents>
```

FIG. 129

```
<section priority="2">
  <segment start="smpte=00:00:57:10" end="smpte=00:01:0
0:28" priority="2"/>
  </section>
  <section priority="4">
    <segment start="smpte=00:01:00:29" end="smpte=00:01:1
4:14" priority="4"/>
    </section>
    <section priority="2">
      <segment start="smpte=00:01:14:15" end="smpte=00:01:2
4:20" priority="2"/>
      </section>
      <section priority="3">
        <segment start="smpte=00:01:24:21" end="smpte=00:01:3
9:26" priority="3"/>
        </section>
        <section priority="2">
          <segment start="smpte=00:01:39:27" end="smpte=00:01:5
2:09" priority="2"/>
          <segment start="smpte=00:01:52:10" end="smpte=00:02:0
2:16" priority="2"/>
          <segment start="smpte=00:02:02:17" end="smpte=00:02:3
1:09" priority="2"/>
          <segment start="smpte=00:02:31:10" end="smpte=00:02:4
7:18" priority="3"/>
        </section>
        <section priority="1">
          <segment start="smpte=00:02:47:19" end="smpte=00:02:5
9:03" priority="1"/>
          <segment start="smpte=00:02:59:04" end="smpte=00:03:0
7:14" priority="1"/>
        </section>
        <section priority="2">
          <segment start="smpte=00:03:07:15" end="smpte=00:03:1
3:28" priority="2"/>
          <segment start="smpte=00:03:13:29" end="smpte=00:03:2
1:28" priority="2"/>
          <segment start="smpte=00:03:21:29" end="smpte=00:03:3
3:15" priority="2"/>
          <segment start="smpte=00:03:33:16" end="smpte=00:03:4
7:00" priority="2"/>
          <segment start="smpte=00:03:47:01" end="smpte=00:03:5
8:14" priority="2"/>
        </section>
      </section>
    </section>
  </section>
</section>
```

FIG. 130

```
    <segment start="smpte=00:03:58:15" end="smpte=00:04:1
2:27" priority="2"/>
    </section>
    <section priority="3">
        <segment start="smpte=00:04:12:28" end="smpte=00:04:2
0:01" priority="3"/>
        </section>
        <section priority="4">
            <segment start="smpte=00:04:20:02" end="smpte=00:04:3
1:05" priority="4"/>
            <segment start="smpte=00:04:31:06" end="smpte=00:04:3
4:28" priority="4"/>
            <segment start="smpte=00:04:34:29" end="smpte=00:04:3
7:06" priority="4"/>
            </section>
            <section priority="5">
                <segment start="smpte=00:04:37:07" end="smpte=00:04:5
7:05" priority="5"/>
                </section>
                <section priority="5">
                    <segment start="smpte=00:04:57:06" end="smpte=00:05:0
0:02" priority="5"/>
                    <segment start="smpte=00:05:00:03" end="smpte=00:05:0
2:06" priority="4"/>
                    </section>
                    <section priority="2">
                        <segment start="smpte=00:05:02:07" end="smpte=00:05:0
4:16" priority="2"/>
                        </section>
                        <section priority="4">
                            <segment start="smpte=00:05:04:17" end="smpte=00:05:1
3:25" priority="4"/>
                            <segment start="smpte=00:05:13:26" end="smpte=00:05:1
7:01" priority="4"/>
                            <segment start="smpte=00:05:17:02" end="smpte=00:05:2
3:21" priority="3"/>
                            <segment start="smpte=00:05:23:22" end="smpte=00:05:4
4:15" priority="4"/>
                            <segment start="smpte=00:05:44:16" end="smpte=00:05:5
0:27" priority="4"/>
                            <segment start="smpte=00:05:50:28" end="smpte=00:06:0
8:15" priority="4"/>
                            <segment start="smpte=00:06:08:16" end="smpte=00:06:1
8:05" priority="4"/>
                        </section>
                    </section>
                </section>
            </section>
        </section>
    </section>
</section>
```

FIG. 131

```
<segment start="smpte=00:06:18:06" end="smpte=00:06:2
4:04" priority="4"/>
    <segment start="smpte=00:06:24:05" end="smpte=00:06:4
1:04" priority="4"/>
    </section>
    </section>
    </context>
    </channel>
</mediaobject>
<mediaobject caption="YOKOZUNA" type="audiovideo" format="mpeg
1-system"
    seq="2" locator="sumou02.mpg">
    <channel caption="GROUND SUMO TOURNAMENT audiovideo" p
riority="5">
        <pointofview keyword="audiovideo" priority="5">
            <context>
                <section caption="SUMO WRESTLER2 VS. SUMO WRESTLE
R3" priority="4">
                    <section priority="4">
                        <segment start="smpte=00:00:00:00" end="smpte=00:00:4
2:24" priority="4"/>
                    </section>
                    <section priority="3">
                        <segment start="smpte=00:00:42:25" end="smpte=00:00:5
7:21" priority="3"/>
                    </section>
                    <section priority="2">
                        <segment start="smpte=00:00:57:22" end="smpte=00:01:2
1:26" priority="1"/>
                        <segment start="smpte=00:01:21:27" end="smpte=00:01:2
8:02" priority="2"/>
                        <segment start="smpte=00:01:28:03" end="smpte=00:01:3
5:17" priority="2"/>
                        <segment start="smpte=00:01:35:18" end="smpte=00:01:4
3:21" priority="2"/>
                        <segment start="smpte=00:01:43:22" end="smpte=00:02:0
0:02" priority="2"/>
                        <segment start="smpte=00:02:00:03" end="smpte=00:02:2
1:05" priority="2"/>
                        <segment start="smpte=00:02:21:06" end="smpte=00:02:2
9:06" priority="2"/>
                        <segment start="smpte=00:02:29:07" end="smpte=00:02:4
5:27" priority="2"/>
                        <segment start="smpte=00:02:45:28" end="smpte=00:02:4
9:20" priority="2"/>
                    </section>
                </section>
            </context>
        </channel>
    </mediaobject>
```

FIG. 132

```
</section>
<section priority="3">
    <segment start="smpte=00:02:49:21" end="smpte=00:02:5
8:26" priority="3"/>
    <segment start="smpte=00:02:58:27" end="smpte=00:03:0
2:25" priority="3"/>
</section>
<section priority="4">
    <segment start="smpte=00:03:02:26" end="smpte=00:03:0
4:27" priority="4"/>
</section>
<section priority="5">
    <segment start="smpte=00:03:04:28" end="smpte=00:03:3
0:11" priority="5"/>
</section>
<section priority="4">
    <segment start="smpte=00:03:30:12" end="smpte=00:03:3
3:27" priority="4"/>
</section>
<section priority="3">
    <segment start="smpte=00:03:33:28" end="smpte=00:03:3
9:01" priority="3"/>
    <segment start="smpte=00:03:39:02" end="smpte=00:03:5
4:21" priority="3"/>
</section>
<section priority="4">
    <segment start="smpte=00:03:54:22" end="smpte=00:04:2
3:17" priority="4"/>
</section>
<section priority="3">
    <segment start="smpte=00:04:23:18" end="smpte=00:05:1
0:17" priority="3"/>
</section>
<section priority="1">
    <segment start="smpte=00:05:10:18" end="smpte=00:05:2
3:29" priority="1"/>
</section>
</section>
</context>
</channel>
</mediaobject>
</contents>
```

FIG. 133

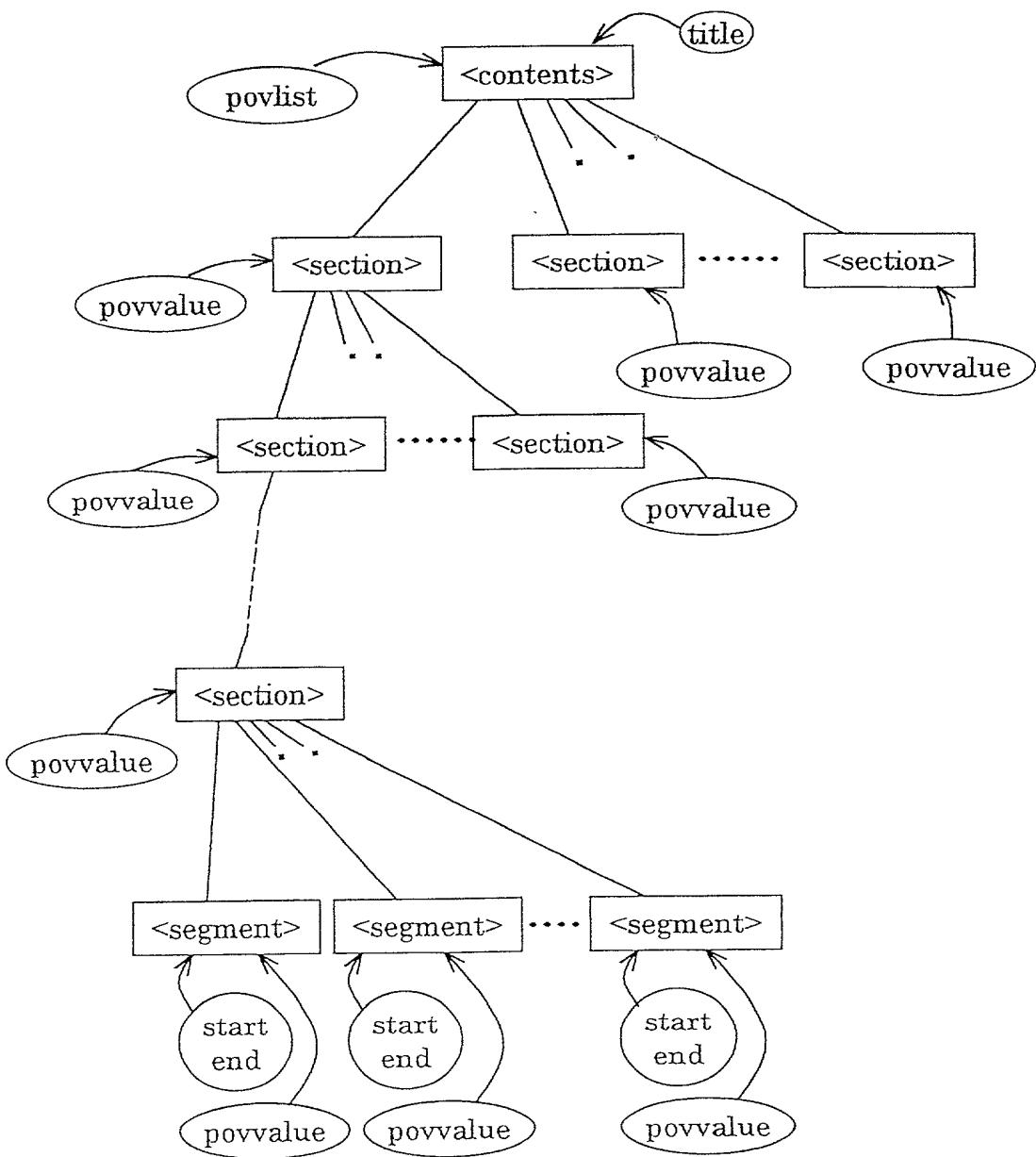


FIG. 134

{ VIEW1, VIEW2, VIEW3, ⋯ ,
VIEWn }

FIG. 135

{ 5, 0, 2, ⋯ , 0 }

FIG. 136

DTD FOR DESCRIBING CONTEXT DESCRIPTION DATA THROUGH USE OF XML

```
<?xml version="1.0"?>
```

```
<!ELEMENT contents (povlist?,section+)>
<!ATTLIST contents
  contents-id CDATA #REQUIRED
  title CDATA #REQUIRED
  runtime NMTOKEN #REQUIRED>
<!ELEMENT povlist (pointofview+)>
<!ELEMENT pointofview EMPTY>
<!ATTLIST pointofview
  keyword CDATA #REQUIRED>
<!ELEMENT section (povvalue?,(section+|segment+))>
<!ATTLIST section
  caption CDATA #IMPLIED>
<!ELEMENT povvalue (priority+)>
<!ELEMENT priority EMPTY>
<!ELEMENT segment (povvalue?)>
<!ATTLIST segment
  start CDATA #REQUIRED
  end CDATA #REQUIRED>
<!ELEMENT pointofview EMPTY>
<!ATTLIST pointofview
  keyword CDATA #REQUIRED
  priority NMTOKEN #REQUIRED>
```

ONE EXAMPLE OF XML DOCUMENT RELATING TO CONTEXT DESCRIPTION DATA PREPARED BY DTD

```
<?xml version="1.0" encoding="euc-jp"?>
<!DOCTYPE contents SYSTEM "http://mserv.trl.mei.co.jp/SMML/program10.dtd">
```

```
<contents contents-id="urn:upi:nhk:12345" title="GROUND SUMO
TOURNAMENT" runtime="11:42">
  <povlist>
    <pointofview keyword="SUMO WRESTLER0"/>
    <pointofview keyword="SUMO WRESTLER1"/>
    <pointofview keyword="SUMO WRESTLER2"/>
    <pointofview keyword="SUMO WRESTLER3"/>
    <pointofview keyword="SUMO WRESTLER4"/>
    <pointofview keyword="SUMO WRESTLER5"/>
    <pointofview keyword="SUMO NAME"/>
    <pointofview keyword="WIN-LOSS RECORD"/>
    <pointofview keyword="VIDEO"/>
  </povlist>
  <section caption="SUMO WRESTLER0 VS. SUMO WRESTLER1">
```

FIG. 137

```
<povvalue>
  <priority value="5"/>
  <priority value="5"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
</povvalue>
<section>
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="1"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:00:00:00" end="smpte=00:00:04:17">
    <povvalue>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="1"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
    </povvalue>
  </segment>
</section>
<section>
  <segment start="smpte=00:00:04:18" end="smpte=00:00:09:08">
  </segment>
</section>
<section>
  <povvalue>
    <priority value="4"/>
```

FIG. 138

```
<priority value="0"/>
</povvalue>
<segment start="smpte=00:00:09:09" end="smpte=00:00:14:13">
</segment>
</section>
<section>
<povvalue>
<priority value="3"/>
<priority value="3"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:00:14:14" end="smpte=00:00:19:19">
<povvalue>
<priority value="3"/>
<priority value="3"/>
<priority value="0"/>
</povvalue>
</segment>
<segment start="smpte=00:00:19:20" end="smpte=00:00:22:19">
<povvalue>
<priority value="1"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
```

FIG. 139

```
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
</segment>
<segment start="smpte=00:00:22:20" end="smpte=00:00:28:10">
<povvalue>
<priority value="3"/>
<priority value="3"/>
<priority value="0"/>
</povvalue>
</segment>
</section>
<section>
<povvalue>
<priority value="3"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="2"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:00:28:11" end="smpte=00:00:30:28">
<povvalue>
<priority value="3"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="2"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
```

FIG. 140

```
</segment>
<segment start="smpte=00:00:30:29" end="smpte=00:00:43:11">
  <povvalue>
    <priority value="3"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="1"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
</section>
<section>
  <povvalue>
    <priority value="3"/>
    <priority value="3"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:00:43:12" end="smpte=00:00:46:20">
    <povvalue>
      <priority value="3"/>
      <priority value="3"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
    </povvalue>
  </segment>
</section>
<section>
  <povvalue>
    <priority value="4"/>
```

FIG. 141

```
<priority value="0"/>
</povvalue>
<segment start="smpte=00:00:46:21" end="smpte=00:00:57:09">
<povvalue>
<priority value="4"/>
<priority value="0"/>
</povvalue>
</segment>
</section>
<section>
<povvalue>
<priority value="3"/>
<priority value="3"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:00:57:10" end="smpte=00:01:00:28">
<povvalue>
<priority value="3"/>
<priority value="3"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
```

FIG. 142

```
<priority value="0"/>
  <priority value="0"/>
</povvalue>
</segment>
</section>
<section>
  <povvalue>
    <priority value="5"/>
    <priority value="5"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
<segment start="smpte=00:01:00:29" end="smpte=00:01:14:14">
  <povvalue>
    <priority value="5"/>
    <priority value="5"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
</section>
<section>
  <povvalue>
    <priority value="2"/>
    <priority value="2"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
<segment start="smpte=00:01:14:15" end="smpte=00:01:24:20">
```

FIG. 143

```
</segment>
</section>
<section>
  <povvalue>
    <priority value="4"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="3"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:01:24:21" end="smpte=00:01:39:26">
    <povvalue>
      <priority value="4"/>
      <priority value="4"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="3"/>
      <priority value="0"/>
    </povvalue>
  </segment>
</section>
<section>
  <povvalue>
    <priority value="4"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:01:39:27" end="smpte=00:01:52:09">
    <povvalue>
      <priority value="4"/>
      <priority value="1"/>
    </povvalue>
  </segment>
</section>
```

FIG. 144

```
<priority value="0"/>
</povvalue>
</segment>
<segment start="smpte=00:01:52:10" end="smpte=00:02:02:16">
<povvalue>
<priority value="4"/>
<priority value="0"/>
</povvalue>
</segment>
<segment start="smpte=00:02:02:17" end="smpte=00:02:31:09">
<povvalue>
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
</povvalue>
</segment>
<segment start="smpte=00:02:31:10" end="smpte=00:02:47:18">
<povvalue>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
```

FIG. 145

```
<priority value="0"/>
<priority value="0"/>
</povvalue>
</segment>
</section>
<section>
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="2"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:02:47:19" end="smpte=00:02:59:03">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="2"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
</segment>
</section>
<section>
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="2"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:02:59:04" end="smpte=00:03:07:14">
```

FIG. 146

```
<povvalue>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="2"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
</povvalue>
</segment>
</section>
<section>
  <povvalue>
    <priority value="3"/>
    <priority value="3"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:03:07:15" end="smpte=00:03:13:28">
    <povvalue>
      <priority value="3"/>
      <priority value="3"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
    </povvalue>
  </segment>
  <segment start="smpte=00:03:13:29" end="smpte=00:03:21:28">
    <povvalue>
      <priority value="4"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
    </povvalue>
  </segment>

```

FIG. 147

FIG. 148

```
</povvalue>
</segment>
<segment start="smpte=00:03:58:15" end="smpte=00:04:12:27">
  <povvalue>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
</section>
<section>
  <povvalue>
    <priority value="5"/>
    <priority value="5"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
<segment start="smpte=00:04:12:28" end="smpte=00:04:20:01">
  <povvalue>
    <priority value="4"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
<segment start="smpte=00:04:20:02" end="smpte=00:04:31:05">
  <povvalue>
    <priority value="4"/>
```

FIG. 149

```
<priority value="0"/>
</povvalue>
</segment>
<segment start="smpte=00:04:31:06" end="smpte=00:04:34:28">
<povvalue>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
</povvalue>
</segment>
<segment start="smpte=00:04:34:29" end="smpte=00:04:37:06">
<povvalue>
<priority value="4"/>
<priority value="0"/>
</povvalue>
</segment>
<segment start="smpte=00:04:37:07" end="smpte=00:04:57:05">
<povvalue>
<priority value="5"/>
<priority value="5"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
```

FIG. 150

```
<povvalue>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
</povvalue>
</segment>
<segment start="smpte=00:04:57:06" end="smpte=00:05:00:02">
  <povvalue>
    <priority value="5"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
<segment start="smpte=00:05:00:03" end="smpte=00:05:02:06">
  <povvalue>
    <priority value="5"/>
    <priority value="5"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
</section>
<section>
  <segment start="smpte=00:05:02:07" end="smpte=00:05:04:16">
    </segment>
</section>
<section>
  <povvalue>
    <priority value="5"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
```

FIG. 151

```
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:05:04:17" end="smpte=00:05:13:25">
<povvalue>
<priority value="5"/>
<priority value="0"/>
</povvalue>
</segment>
<segment start="smpte=00:05:13:26" end="smpte=00:05:17:01">
<povvalue>
<priority value="5"/>
<priority value="0"/>
</povvalue>
</segment>
<segment start="smpte=00:05:17:02" end="smpte=00:05:23:21">
<povvalue>
<priority value="4"/>
<priority value="0"/>
</povvalue>
</segment>
</section>
```

FIG. 152

```
<section>
  <povvalue>
    <priority value="4"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
  </povvalue>
  <segment start="smpte=00:05:23:22" end="smpte=00:05:44:15">
    <pointofview keyword="VIDEO" priority="4"/>
    <pointofview keyword="SUMO WRESTLER0" priority="5"/>
    <pointofview keyword="SUMO WRESTLER1" priority="4"/>
    <povvalue>
      <priority value="5"/>
      <priority value="4"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="4"/>
    </povvalue>
  </segment>
  <segment start="smpte=00:05:44:16" end="smpte=00:05:50:27">
    <povvalue>
      <priority value="5"/>
      <priority value="4"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="4"/>
    </povvalue>
  </segment>
  <segment start="smpte=00:05:50:28" end="smpte=00:06:08:15">
    <povvalue>
      <priority value="4"/>
```

FIG. 153

```
<povvalue>
<priority value="4"/>
<priority value="0"/>
<priority value="4"/>
</povvalue>
</segment>
<segment start="smpte=00:06:08:16" end="smpte=00:06:18:05">
<povvalue>
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
<priority value="4"/>
</povvalue>
</segment>
</section>
<section>
<povvalue>
<priority value="4"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:06:18:06" end="smpte=00:06:24:04">
</segment>
<segment start="smpte=00:06:24:05" end="smpte=00:06:41:04">
</segment>
</section>
</section>
<section caption="SUMO WRESTLER2 VS. SUMO WRESTLER3">
<pointofview keyword="SUMO WRESTLER2" priority="5"/>
```

FIG. 154

```
<pointofview keyword="SUMO WRESTLER3" priority="5"/>
<povvalue>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="5"/>
  <priority value="5"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
</povvalue>
<section>
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="5"/>
    <priority value="5"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:06:18:05" end="smpte=00:07:00:24">
    <povvalue>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="5"/>
      <priority value="5"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="4"/>
      <priority value="0"/>
      <priority value="0"/>
    </povvalue>
    </segment>
  </section>
  <section>
    <povvalue>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="4"/>
      <priority value="4"/>
    </povvalue>
  </section>
```

FIG. 155

FIG. 156

```
</segment>
</section>
<section>
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:07:39:27" end="smpte=00:07:46:02">
    <povvalue>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="4"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
    </povvalue>
  </segment>
</section>
<section>
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:07:46:03" end="smpte=00:07:53:17">
    <povvalue>
      <priority value="0"/>
      <priority value="0"/>
```

FIG. 157

```
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
</segment>
</section>
<section>
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:07:53:18" end="smpte=00:08:01:21">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
</segment>
</section>
<section>
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
```

FIG. 158

```
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:08:01:22" end="smpte=00:08:18:02">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
<segment start="smpte=00:08:18:03" end="smpte=00:08:39:05">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
<segment start="smpte=00:08:39:06" end="smpte=00:08:47:06">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
<segment start="smpte=00:08:47:07" end="smpte=00:09:03:27">
```

FIG. 159

```
<povvalue>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="4"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
</povvalue>
</segment>
<segment start="smpte=00:09:03:28" end="smpte=00:09:07:20">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
<segment start="smpte=00:09:07:21" end="smpte=00:09:16:26">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
<segment start="smpte=00:09:16:27" end="smpte=00:09:20:25">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
```

FIG. 160

```
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
</segment>
<segment start="smpte=00:09:20:26" end="smpte=00:09:22:27">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
</segment>
</section>
<section>
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="5"/>
<priority value="5"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
</section>
<segment start="smpte=00:09:22:28" end="smpte=00:09:48:11">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="5"/>
<priority value="5"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
```

FIG. 161

```
</segment>
<segment start="smpte=00:09:48:12" end="smpte=00:09:51:27">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="5"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
<segment start="smpte=00:09:51:28" end="smpte=00:09:57:01">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
<segment start="smpte=00:09:57:02" end="smpte=00:10:12:21">
  <pointofview keyword="SUMO WRESTLER2" priority="4"/>
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
</section>
<section>
  <povvalue>
```

FIG. 162

```
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
</povvalue>
<segment start="smpte=00:10:12:22" end="smpte=00:10:41:17">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
  </povvalue>
  </segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER2" priority="5"/>
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="5"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:10:41:18" end="smpte=00:11:28:17">
    <povvalue>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="5"/>
      <priority value="0"/>
      <priority value="0"/>
```

FIG. 163

```
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
</segment>
</section>
<section>
<segment start="smpte=00:11:28:18" end="smpte=00:11:41:29">
</segment>
</section>
</section>
</contents>
```

FIG. 164

DTD FOR DESCRIBING CONTEXT DESCRIPTION DATA THROUGH
USE OF XML

```
<?xml version="1.0"?>
```

```
<!ELEMENT contents (povlist?,section+)>
<!ATTLIST contents contents-id CDATA #REQUIRED
          title CDATA #REQUIRED
          runtime NMTOKEN #REQUIRED>
<!ELEMENT povlist (pointofview+)>
<!ELEMENT pointofview EMPTY>
<!ATTLIST pointofview keyword CDATA #REQUIRED>
<!ELEMENT section (povvalue?,(section+|segment+))>
<!ATTLIST section caption CDATA #IMPLIED>
<!ELEMENT povvalue (priority+)>
<!ELEMENT priority EMPTY>
<!ELEMENT segment (povvalue?,dominant-data)>
<!ATTLIST segment start CDATA #REQUIRED
          end CDATA #REQUIRED>
<!ELEMENT pointofview EMPTY>
<!ATTLIST pointofview keyword CDATA #REQUIRED
          priority NMTOKEN #REQUIRED>
<!ELEMENT dominant-data EMPTY>
<!ATTLIST dominant-data frame-no NMTOKEN #IMPLIED
          start CDATA #IMPLIED
          end CDATA #IMPLIED
          locator CDATA #IMPLIED>
```

ONE EXAMPLE OF XML DOCUMENT RELATING TO CONTEXT DESCRIPTION DATA PREPARED BY DTD

```
<?xml version="1.0" encoding="euc-jp"?>
<!DOCTYPE contents SYSTEM "http://mserv.trl.mei.co.jp/SMML/program11.dtd">

<contents contents-id="urn:upi:nhk:12345" title="GROUND SUMO
TOURNAMENT" runtime="11:42">
  <povlist>
    <pointofview keyword="SUMO WRESTLERO"/>
    <pointofview keyword="SUMO WRESTLER1"/>
    <pointofview keyword="SUMO WRESTLER2"/>
    <pointofview keyword="SUMO WRESTLER3"/>
    <pointofview keyword="SUMO WRESTLER4"/>
```

FIG. 165

```
<pointofview keyword="SUMO WRESTLER5"/>
<pointofview keyword="SUMO NAME"/>
<pointofview keyword="WIN-LOSS RECORD"/>
<pointofview keyword="VIDEO"/>
</povlist>
<section caption="SUMO WRESTLER0 VS. SUMO WRESTLER1">
  <povvalue>
    <priority value="5"/>
    <priority value="5"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <section>
    <povvalue>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="1"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
    </povvalue>
    <segment start="smpte=00:00:00:00" end="smpte=00:00:04:17">
      <povvalue>
        <priority value="0"/>
        <priority value="0"/>
        <priority value="0"/>
        <priority value="0"/>
        <priority value="1"/>
        <priority value="0"/>
        <priority value="0"/>
        <priority value="0"/>
        <priority value="0"/>
      </povvalue>
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp01.gi
f"/>
```

FIG. 166

```
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma01.m
p3"/>
    </segment>
</section>
<section>
    <segment start="smpte=00:00:04:18" end="smpte=00:00:09:08">
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp02.gi
f"/>
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma02.m
p3"/>
        </segment>
    </section>
    <section>
        <povvalue>
            <priority value="4"/>
            <priority value="0"/>
            <priority value="0"/>
        </povvalue>
        <segment start="smpte=00:00:09:09" end="smpte=00:00:14:13">
            <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp03.gi
f"/>
            <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma03.m
p3"/>
            </segment>
        </section>
        <section>
            <povvalue>
                <priority value="3"/>
                <priority value="3"/>
                <priority value="0"/>
                <priority value="0"/>
                <priority value="0"/>
                <priority value="0"/>
                <priority value="0"/>
                <priority value="0"/>
            </povvalue>
            <segment start="smpte=00:00:14:14" end="smpte=00:00:19:19">
```

FIG. 167

FIG. 168

```
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp06.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma06.m
p3"/>
</segment>
</section>
<section>
<povvalue>
<priority value="3"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="2"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:00:28:11" end="smpte=00:00:30:28">
<povvalue>
<priority value="3"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="2"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp07.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma07.m
p3"/>
</segment>
<segment start="smpte=00:00:30:29" end="smpte=00:00:43:11">
<povvalue>
<priority value="3"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="1"/>
<priority value="0"/>
```

FIG. 169

```
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<dominant-data start="smpte=00:00:31:20" end="smpte=00:00:
35:05"/>
</segment>
</section>
<section>
<povvalue>
<priority value="3"/>
<priority value="3"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:00:43:12" end="smpte=00:00:46:20">
<povvalue>
<priority value="3"/>
<priority value="3"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp08.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma08.m
p3"/>
</segment>
</section>
<section>
<povvalue>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
```

FIG. 170

```
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:00:46:21" end="smpte=00:00:57:09">
<povvalue>
<priority value="4"/>
<priority value="0"/>
</povvalue>
<dominant-data start="smpte=00:00:47:00" end="smpte=00:00:
50:03"/>
</segment>
</section>
<section>
<povvalue>
<priority value="3"/>
<priority value="3"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:00:57:10" end="smpte=00:01:00:28">
<povvalue>
<priority value="3"/>
<priority value="3"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
```

FIG. 171

```
    <povvalue>
        <priority value="0"/>
    </povvalue>
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp09.gi
f"/>
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma09.m
p3"/>
        </segment>
    </section>
    <section>
        <povvalue>
            <priority value="5"/>
            <priority value="5"/>
            <priority value="0"/>
            <priority value="0"/>
            <priority value="0"/>
            <priority value="0"/>
            <priority value="4"/>
            <priority value="0"/>
            <priority value="0"/>
        </povvalue>
        <segment start="smpte=00:01:00:29" end="smpte=00:01:14:14">
            <povvalue>
                <priority value="5"/>
                <priority value="5"/>
                <priority value="0"/>
                <priority value="0"/>
                <priority value="0"/>
                <priority value="0"/>
                <priority value="4"/>
                <priority value="0"/>
                <priority value="0"/>
            </povvalue>
            <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp10.gi
f"/>
            <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma10.m
p3"/>
        </segment>
    </section>
    <section>
        <povvalue>
            <priority value="2"/>
            <priority value="2"/>
            <priority value="0"/>
            <priority value="0"/>
        </povvalue>
    </section>

```

FIG. 172

```
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:01:14:15" end="smpte=00:01:24:20">
  <dominant-data start="smpte=00:01:15:20" end="smpte=00:01:
19:03"/>
  </segment>
</section>
<section>
  <povvalue>
    <priority value="4"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="3"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:01:24:21" end="smpte=00:01:39:26">
    <povvalue>
      <priority value="4"/>
      <priority value="4"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="3"/>
      <priority value="0"/>
    </povvalue>
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp11.gi
f"/>
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma11.m
p3"/>
  </segment>
</section>
<section>
  <povvalue>
    <priority value="4"/>
```

FIG. 173

```
<priority value="4"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:01:39:27" end="smpte=00:01:52:09">
<povvalue>
<priority value="4"/>
<priority value="1"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp12.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma12.m
p3"/>
</segment>
<segment start="smpte=00:01:52:10" end="smpte=00:02:02:16">
<povvalue>
<priority value="4"/>
<priority value="0"/>
</povvalue>
<dominant-data start="smpte=00:01:52:20" end="smpte=00:01:
55:10"/>
</segment>
<segment start="smpte=00:02:02:17" end="smpte=00:02:31:09">
<povvalue>
<priority value="4"/>
```

FIG. 174

```
<priority value="4"/>
<priority value="0"/>
<povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp13.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma13.m
p3"/>
</segment>
<segment start="smpte=00:02:31:10" end="smpte=00:02:47:18">
<povvalue>
<priority value="4"/>
<priority value="0"/>
<povvalue>
<dominant-data start="smpte=00:02:31:20" end="smpte=00:02:
38:11"/>
</segment>
</section>
<section>
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="2"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<povvalue>
<segment start="smpte=00:02:47:19" end="smpte=00:02:59:03">
<povvalue>
```

FIG. 175

```
<priority value="0"/>
<priority value="0"/>
<priority value="2"/>
<priority value="0"/>
</povvalue>
<dominant-data start="smpte=00:02:47:25" end="smpte=00:02:
48:02"/>
</segment>
</section>
<section>
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="2"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:02:59:04" end="smpte=00:03:07:14">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="2"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<dominant-data start="smpte=00:02:59:10" end="smpte=00:03:
02:12"/>
</segment>
</section>
<section>
<povvalue>
<priority value="3"/>
```

FIG. 176

```
<priority value="3"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:03:07:15" end="smpte=00:03:13:28">
<povvalue>
<priority value="3"/>
<priority value="3"/>
<priority value="0"/>
</povvalue>
<dominant-data start="smpte=00:03:08:12" end="smpte=00:03:
10:20"/>
</segment>
<segment start="smpte=00:03:13:29" end="smpte=00:03:21:28">
<povvalue>
<priority value="4"/>
<priority value="0"/>
</povvalue>
<dominant-data start="smpte=00:03:15:10" end="smpte=00:03:
18:03"/>
</segment>
<segment start="smpte=00:03:21:29" end="smpte=00:03:33:15">
<povvalue>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
```

FIG. 177

```
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<dominant-data start="smpte=00:03:22:08" end="smpte=00:03:
25:02"/>
</segment>
<segment start="smpte=00:03:33:16" end="smpte=00:03:47:00">
<povvalue>
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
</povvalue>
<dominant-data start="smpte=00:03:35:09" end="smpte=00:03:
38:21"/>
</segment>
<segment start="smpte=00:03:47:01" end="smpte=00:03:58:14">
<povvalue>
<priority value="4"/>
<priority value="0"/>
</povvalue>
<dominant-data start="smpte=00:03:48:00" end="smpte=00:03:
51:17"/>
</segment>
<segment start="smpte=00:03:58:15" end="smpte=00:04:12:27">
<povvalue>
<priority value="0"/>
<priority value="4"/>
```

FIG. 178

```
<priority value="0"/>
</povvalue>
<dominant-data start="smpte=00:03:59:02" end="smpte=00:04:
01:07"/>
</segment>
</section>
<section>
<povvalue>
<priority value="5"/>
<priority value="5"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:04:12:28" end="smpte=00:04:20:01">
<povvalue>
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp14.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma14.m
p3"/>
</segment>
<segment start="smpte=00:04:20:02" end="smpte=00:04:31:05">
<povvalue>
<priority value="4"/>
<priority value="0"/>
```

FIG. 179

```
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp15.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma15.m
p3"/>
</segment>
<segment start="smpte=00:04:31:06" end="smpte=00:04:34:28">
<povvalue>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp16.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma16.m
p3"/>
</segment>
<segment start="smpte=00:04:34:29" end="smpte=00:04:37:06">
<povvalue>
<priority value="4"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp17.gi
f"/>
```

FIG. 180

```
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma17.m
p3"/>
</segment>
<segment start="smpte=00:04:37:07" end="smpte=00:04:57:05">
<povvalue>
<priority value="5"/>
<priority value="5"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp18.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma18.m
p3"/>
</segment>
<segment start="smpte=00:04:57:06" end="smpte=00:05:00:02">
<povvalue>
<priority value="5"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp19.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma19.m
p3"/>
</segment>
<segment start="smpte=00:05:00:03" end="smpte=00:05:02:06">
<povvalue>
<priority value="5"/>
<priority value="5"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
```

FIG. 181

```
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp20.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma20.m
p3"/>
</segment>
</section>
<section>
<segment start="smpte=00:05:02:07" end="smpte=00:05:04:16">
<dominant-data start="smpte=00:05:03:02" end="smpte=00:05:
02:20"/>
</segment>
</section>
<section>
<povvalue>
<priority value="5"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:05:04:17" end="smpte=00:05:13:25">
<povvalue>
<priority value="5"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp21.gi
f"/>
```

FIG. 182

```
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma21.m
p3"/>
</segment>
<segment start="smpte=00:05:13:26" end="smpte=00:05:17:01">
<povvalue>
<priority value="5"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp22.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma22.m
p3"/>
</segment>
<segment start="smpte=00:05:17:02" end="smpte=00:05:23:21">
<povvalue>
<priority value="4"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp23.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma23.m
p3"/>
</segment>
</section>
<section>
<povvalue>
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
```

FIG. 183

```
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
</povvalue>
<segment start="smpte=00:05:23:22" end="smpte=00:05:44:15">
<pointofview keyword="VIDEO" priority="4"/>
<pointofview keyword="SUMO WRESTLER0" priority="5"/>
<pointofview keyword="SUMO WRESTLER1" priority="4"/>
<povvalue>
<priority value="5"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp24.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma24.m
p3"/>
</segment>
<segment start="smpte=00:05:44:16" end="smpte=00:05:50:27">
<povvalue>
<priority value="5"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp25.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma25.m
p3"/>
</segment>
<segment start="smpte=00:05:50:28" end="smpte=00:06:08:15">
```

FIG. 184

FIG. 185

```
<priority value="0"/>
</povvalue>
<segment start="smpte=00:06:18:06" end="smpte=00:06:24:04">
<dominant-data start="smpte=00:06:18:25" end="smpte=00:06:
20:17"/>
</segment>
<segment start="smpte=00:06:24:05" end="smpte=00:06:41:04">
<dominant-data start="smpte=00:06:25:01" end="smpte=00:06:
30:11"/>
</segment>
</section>
</section>
<section caption="SUMO WRESTLER2 VS. SUMO WRESTLER3">
<pointofview keyword="SUMO WRESTLER2" priority="5"/>
<pointofview keyword="SUMO WRESTLER3" priority="5"/>
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="5"/>
<priority value="5"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<section>
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="5"/>
<priority value="5"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:06:18:05" end="smpte=00:07:00:24">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="5"/>
<priority value="5"/>
```

FIG. 186

```
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp28.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma28.m
p3"/>
</segment>
</section>
<section>
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="3"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:07:00:25" end="smpte=00:07:15:21">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="3"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp29.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma29.m
p3"/>
</segment>
</section>
<section>
<povvalue>
```

FIG. 187

```
<priority value="2"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:07:15:22" end="smpte=00:07:39:26">
  <povvalue>
    <priority value="2"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <dominant-data start="smpte=00:07:16:05" end="smpte=00:07:
18:23"/>
  </segment>
</section>
<section>
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:07:39:27" end="smpte=00:07:46:02">
    <povvalue>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="4"/>
      <priority value="0"/>
```

FIG. 188

```
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<dominant-data start="smpte=00:07:41:28" end="smpte=00:07:
43:01"/>
</segment>
</section>
<section>
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:07:46:03" end="smpte=00:07:53:17">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp30.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma30.m
p3"/>
</segment>
</section>
<section>
<povvalue>
<priority value="0"/>
<priority value="0"/>
```

FIG. 189

```
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:07:53:18" end="smpte=00:08:01:21">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp31.gi
f"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma31.m
p3"/>
  </segment>
</section>
<section>
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:08:01:22" end="smpte=00:08:18:02">
    <povvalue>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="4"/>
      <priority value="4"/>
```

FIG. 190

```
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp32.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma32.m
p3"/>
</segment>
<segment start="smpte=00:08:18:03" end="smpte=00:08:39:05">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp33.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma33.m
p3"/>
</segment>
<segment start="smpte=00:08:39:06" end="smpte=00:08:47:06">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp34.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma34.m
p3"/>
```

FIG. 191

```
</segment>
<segment start="smpte=00:08:47:07" end="smpte=00:09:03:27">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp35.gi
f"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma35.m
p3"/>
</segment>
<segment start="smpte=00:09:03:28" end="smpte=00:09:07:20">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp36.gi
f"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma36.m
p3"/>
</segment>
<segment start="smpte=00:09:07:21" end="smpte=00:09:16:26">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
```

FIG. 192

```
<priority value="0"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp37.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma37.m
p3"/>
</segment>
<segment start="smpte=00:09:16:27" end="smpte=00:09:20:25">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp38.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma38.m
p3"/>
</segment>
<segment start="smpte=00:09:20:26" end="smpte=00:09:22:27">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp39.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma39.m
p3"/>
</segment>
</section>
<section>
```

FIG. 193

```
<povvalue>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="5"/>
  <priority value="5"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
</povvalue>
<segment start="smpte=00:09:22:28" end="smpte=00:09:48:11">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="5"/>
    <priority value="5"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp40.gi
f"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma40.m
p3"/>
</segment>
<segment start="smpte=00:09:48:12" end="smpte=00:09:51:27">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="5"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp41.gi
f"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma41.m
p3"/>
```

FIG. 194

```
</segment>
<segment start="smpte=00:09:51:28" end="smpte=00:09:57:01">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp42.gi
f"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma42.m
p3"/>
</segment>
<segment start="smpte=00:09:57:02" end="smpte=00:10:12:21">
  <pointofview keyword="SUMO WRESTLER2" priority="4"/>
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp43.gi
f"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma43.m
p3"/>
</segment>
</section>
<section>
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="4"/>
    <priority value="0"/>
```

FIG. 195

```
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
</povvalue>
<segment start="smpte=00:10:12:22" end="smpte=00:10:41:17">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
  </povvalue>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp44.gi
f"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma44.m
p3"/>
  </segment>
</section>
<section>
  <pointofview keyword="SUMO WRESTLER2" priority="5"/>
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="5"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:10:41:18" end="smpte=00:11:28:17">
    <povvalue>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="5"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
    </povvalue>
```

FIG. 196

```
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp45.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma45.m
p3"/>
</segment>
</section>
<section>
<segment start="smpte=00:11:28:18" end="smpte=00:11:41:29">
<dominant-data start="smpte=00:11:29:13" end="smpte=11:32:2
1"/>
</segment>
</section>
</section>
</contents>
```

FIG. 197

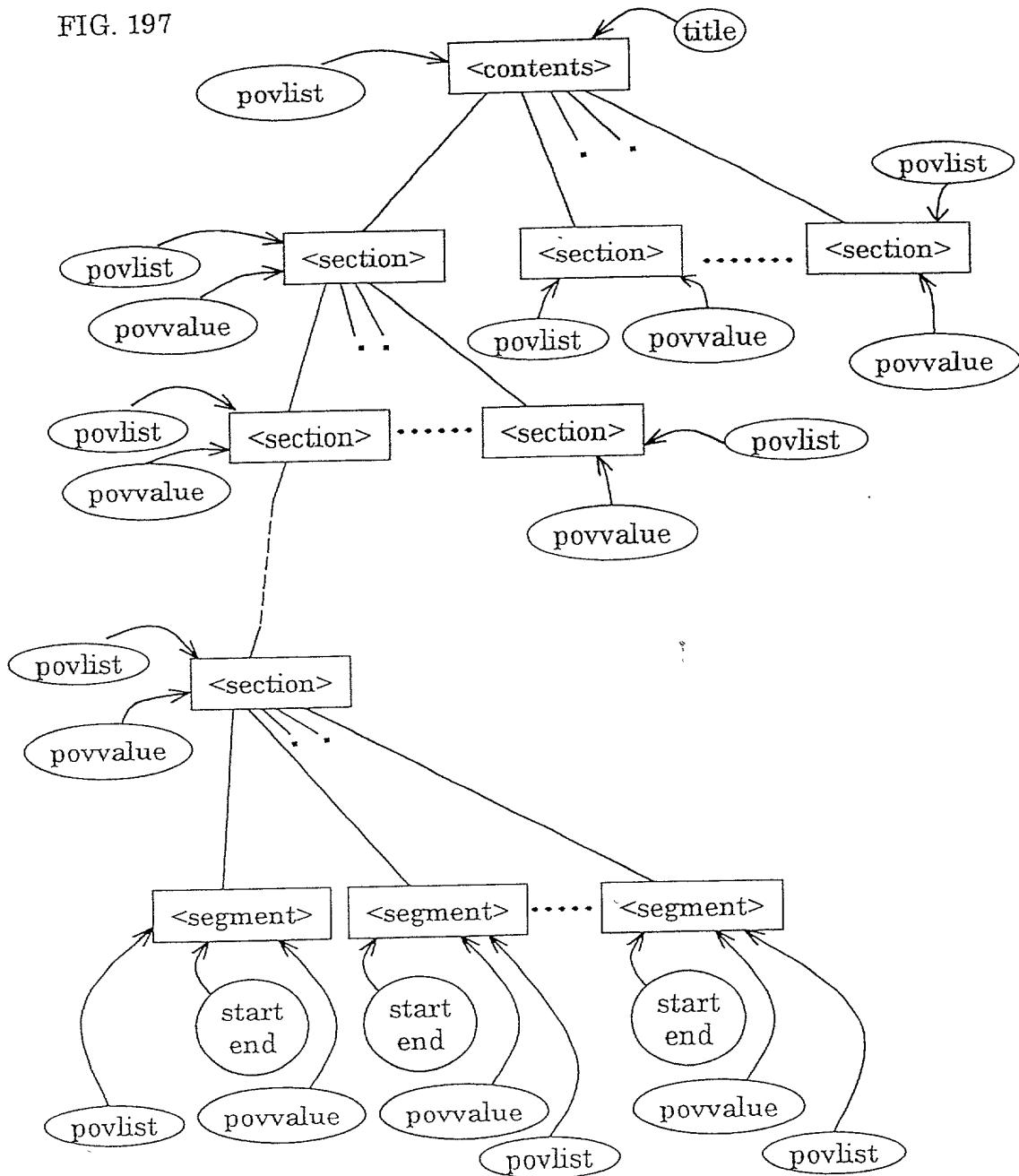


FIG. 198

DTD FOR DESCRIBING CONTEXT DESCRIPTION DATA THROUGH
USE OF XML

```
<?xml version="1.0"?>
```

```
<!ELEMENT contents (povlist?,section+)>
<!ATTLIST contents
  contents-id CDATA      #REQUIRED
  title       CDATA      #REQUIRED
  runtime     NMTOKEN   #REQUIRED>
<!ELEMENT povlist (pointofview+)>
<!ELEMENT pointofview EMPTY>
<!ATTLIST pointofview
  keyword     CDATA      #REQUIRED>
<!ELEMENT section (povlist?,povvalue?,(section+|segment+))>
<!ATTLIST section
  caption    CDATA      #IMPLIED>
<!ELEMENT povvalue (priority+)>
<!ELEMENT priority EMPTY>
<!ELEMENT segment (povlist?,povvalue?)>
<!ATTLIST segment
  start      CDATA      #REQUIRED
  end        CDATA      #REQUIRED>
```

ONE EXAMPLE OF XML DOCUMENT RELATING TO CONTEXT DESCRIPTION DATA PREPARED BY DTD

```
<?xml version="1.0" encoding="euc-jp"?>
<!DOCTYPE contents SYSTEM "http://mserv.trl.mei.co.jp/SMML/program12.dtd">

<contents contents-id="urn:upi:nhk:12345" title="GROUND SUMO
TOURNAMENT" runtime="11:42">
  <povlist>
    <pointofview keyword="SUMO WRESTLER0"/>
    <pointofview keyword="SUMO WRESTLER1"/>
    <pointofview keyword="SUMO WRESTLER2"/>
    <pointofview keyword="SUMO WRESTLER3"/>
    <pointofview keyword="SUMO WRESTLER4"/>
    <pointofview keyword="SUMO WRESTLER5"/>
    <pointofview keyword="SUMO NAME"/>
    <pointofview keyword="WIN-LOSS RECORD"/>
    <pointofview keyword="VIDEO"/>
  </povlist>
  <section caption="SUMO WRESTLER0 VS. SUMO WRESTLER1">
    <povlist>
      <pointofview keyword="SUMO WRESTLER0"/>
```

FIG. 199

```
<pointofview keyword="SUMO WRESTLER1"/>
</povlist>
<povvalue>
  <priority value="5"/>
  <priority value="5"/>
</povvalue>
<section>
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="1"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:00:00:00" end="smpte=00:00:04:17">
    <povvalue>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="1"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
    </povvalue>
  </segment>
</section>
<section>
  <segment start="smpte=00:00:04:18" end="smpte=00:00:09:08">
  </segment>
</section>
<section>
  <povlist>
    <pointofview keyword="SUMO WRESTLER0"/>
    <pointofview keyword="SUMO WRESTLER1"/>
  </povlist>
  <povvalue>
    <priority value="4"/>
    <priority value="0"/>
```

FIG. 200

```
</povvalue>
<segment start="smpte=00:00:09:09" end="smpte=00:00:14:13">
</segment>
</section>
<section>
<povlist>
<pointofview keyword="SUMO WRESTLER0"/>
<pointofview keyword="SUMO WRESTLER1"/>
</povlist>
<povvalue>
<priority value="3"/>
<priority value="3"/>
</povvalue>
<segment start="smpte=00:00:14:14" end="smpte=00:00:19:19">
<povlist>
<pointofview keyword="SUMO WRESTLER0"/>
<pointofview keyword="SUMO WRESTLER1"/>
</povlist>
<povvalue>
<priority value="3"/>
<priority value="3"/>
</povvalue>
</segment>
<segment start="smpte=00:00:19:20" end="smpte=00:00:22:19">
<povvalue>
<priority value="1"/>
<priority value="0"/>
</povvalue>
</segment>
<segment start="smpte=00:00:22:20" end="smpte=00:00:28:10">
<povlist>
<pointofview keyword="SUMO WRESTLER0"/>
<pointofview keyword="SUMO WRESTLER1"/>
</povlist>
<povvalue>
<priority value="3"/>
<priority value="3"/>
```

FIG. 201

```
</povvalue>
</segment>
</section>
<section>
<povvalue>
<priority value="3"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="2"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:00:28:11" end="smpte=00:00:30:28">
<povvalue>
<priority value="3"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="2"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
</segment>
<segment start="smpte=00:00:30:29" end="smpte=00:00:43:11">
<povvalue>
<priority value="3"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="1"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
</segment>
</section>
<section>
<povlist>
```

FIG. 202

```
<pointofview keyword="SUMO WRESTLER0"/>
<pointofview keyword="SUMO WRESTLER1"/>
</povlist>
<povvalue>
<priority value="3"/>
<priority value="3"/>
</povvalue>
<segment start="smpte=00:00:43:12" end="smpte=00:00:46:20">
<povlist>
<pointofview keyword="SUMO WRESTLER0"/>
<pointofview keyword="SUMO WRESTLER1"/>
</povlist>
<povvalue>
<priority value="3"/>
<priority value="3"/>
</povvalue>
</segment>
</section>
<section>
<povvalue>
<priority value="4"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:00:46:21" end="smpte=00:00:57:09">
<povvalue>
<priority value="4"/>
<priority value="0"/>
</povvalue>
</segment>
</section>
```

FIG. 203

```
<section>
  <povlist>
    <pointofview keyword="SUMO WRESTLER0"/>
    <pointofview keyword="SUMO WRESTLER1"/>
  </povlist>
  <povvalue>
    <priority value="3"/>
    <priority value="3"/>
  </povvalue>
  <segment start="smpte=00:00:57:10" end="smpte=00:01:00:28">
    <povlist>
      <pointofview keyword="SUMO WRESTLER0"/>
      <pointofview keyword="SUMO WRESTLER1"/>
    </povlist>
    <povvalue>
      <priority value="3"/>
      <priority value="3"/>
    </povvalue>
  </segment>
</section>
<section>
  <povvalue>
    <priority value="5"/>
    <priority value="5"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:01:00:29" end="smpte=00:01:14:14">
    <povvalue>
      <priority value="5"/>
      <priority value="5"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="4"/>
      <priority value="0"/>
      <priority value="0"/>
    </povvalue>
```

FIG. 204

```
</segment>
</section>
<section>
<povlist>
  <pointofview keyword="SUMO WRESTLER0"/>
  <pointofview keyword="SUMO WRESTLER1"/>
</povlist>
<povvalue>
  <priority value="2"/>
  <priority value="2"/>
</povvalue>
<segment start="smpte=00:01:14:15" end="smpte=00:01:24:20">
</segment>
</section>
<section>
<povvalue>
  <priority value="4"/>
  <priority value="4"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="3"/>
  <priority value="0"/>
</povvalue>
<segment start="smpte=00:01:24:21" end="smpte=00:01:39:26">
<povvalue>
  <priority value="4"/>
  <priority value="4"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="3"/>
  <priority value="0"/>
</povvalue>
</segment>
</section>
<section>
<povlist>
  <pointofview keyword="SUMO WRESTLER0"/>
  <pointofview keyword="SUMO WRESTLER1"/>
```

FIG. 205

```
</povlist>
<povvalue>
  <priority value="4"/>
  <priority value="4"/>
</povvalue>
<segment start="smpte=00:01:39:27" end="smpte=00:01:52:09">
  <povlist>
    <pointofview keyword="SUMO WRESTLER0"/>
    <pointofview keyword="SUMO WRESTLER1"/>
  </povlist>
  <povvalue>
    <priority value="4"/>
    <priority value="1"/>
  </povvalue>
</segment>
<segment start="smpte=00:01:52:10" end="smpte=00:02:02:16">
  <povvalue>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
<segment start="smpte=00:02:02:17" end="smpte=00:02:31:09">
  <povlist>
    <pointofview keyword="SUMO WRESTLER0"/>
    <pointofview keyword="SUMO WRESTLER1"/>
  </povlist>
  <povvalue>
    <priority value="4"/>
    <priority value="4"/>
  </povvalue>
</segment>
<segment start="smpte=00:02:31:10" end="smpte=00:02:47:18">
  <povvalue>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
```

FIG. 206

```
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
</segment>
</section>
<section>
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="2"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:02:47:19" end="smpte=00:02:59:03">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="2"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
</segment>
</section>
<section>
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="2"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
```

FIG. 207

```
<priority value="0"/>
</povvalue>
<segment start="smpte=00:02:59:04" end="smpte=00:03:07:14">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="2"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
</segment>
</section>
<section>
<povlist>
<pointofview keyword="SUMO WRESTLER0"/>
<pointofview keyword="SUMO WRESTLER1"/>
</povlist>
<povvalue>
<priority value="3"/>
<priority value="3"/>
</povvalue>
<segment start="smpte=00:03:07:15" end="smpte=00:03:13:28">
<povlist>
<pointofview keyword="SUMO WRESTLER0"/>
<pointofview keyword="SUMO WRESTLER1"/>
</povlist>
<povvalue>
<priority value="3"/>
<priority value="3"/>
</povvalue>
</segment>
<segment start="smpte=00:03:13:29" end="smpte=00:03:21:28">
<povvalue>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
```

FIG. 208

```
<priority value="0"/>
  <priority value="0"/>
</povvalue>
</segment>
<segment start="smpte=00:03:21:29" end="smpte=00:03:33:15">
  <povvalue>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
<segment start="smpte=00:03:33:16" end="smpte=00:03:47:00">
  <povlist>
    <pointofview keyword="SUMO WRESTLER0"/>
    <pointofview keyword="SUMO WRESTLER1"/>
  </povlist>
  <povvalue>
    <priority value="4"/>
    <priority value="4"/>
  </povvalue>
</segment>
<segment start="smpte=00:03:47:01" end="smpte=00:03:58:14">
  <povvalue>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
<segment start="smpte=00:03:58:15" end="smpte=00:04:12:27">
  <povvalue>
    <priority value="0"/>
    <priority value="4"/>
```

FIG. 209

```
<priority value="0"/>
</povvalue>
</segment>
</section>
<section>
<povlist>
  <pointofview keyword="SUMO WRESTLER0"/>
  <pointofview keyword="SUMO WRESTLER1"/>
</povlist>
<povvalue>
  <priority value="5"/>
  <priority value="5"/>
</povvalue>
<segment start="smpte=00:04:12:28" end="smpte=00:04:20:01">
  <povlist>
    <pointofview keyword="SUMO WRESTLER0"/>
    <pointofview keyword="SUMO WRESTLER1"/>
  </povlist>
  <povvalue>
    <priority value="4"/>
    <priority value="4"/>
  </povvalue>
</segment>
<segment start="smpte=00:04:20:02" end="smpte=00:04:31:05">
  <povvalue>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
<segment start="smpte=00:04:31:06" end="smpte=00:04:34:28">
  <povvalue>
```

FIG. 210

FIG. 211

```
    <priority value="0"/>
  </povvalue>
</segment>
<segment start="smpte=00:05:00:03" end="smpte=00:05:02:06">
  <povlist>
    <pointofview keyword="SUMO WRESTLER0"/>
    <pointofview keyword="SUMO WRESTLER1"/>
  </povlist>
  <povvalue>
    <priority value="5"/>
    <priority value="5"/>
  </povvalue>
</segment>
</section>
<section>
  <segment start="smpte=00:05:02:07" end="smpte=00:05:04:16">
    </segment>
</section>
<section>
  <povvalue>
    <priority value="5"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
<segment start="smpte=00:05:04:17" end="smpte=00:05:13:25">
  <povvalue>
    <priority value="5"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
<segment start="smpte=00:05:13:26" end="smpte=00:05:17:01">
```

FIG. 212

```
<povvalue>
  <priority value="5"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
  <priority value="0"/>
</povvalue>
</segment>
<segment start="smpte=00:05:17:02" end="smpte=00:05:23:21">
  <povvalue>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
</section>
<section>
  <povvalue>
    <priority value="4"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
  </povvalue>
  <segment start="smpte=00:05:23:22" end="smpte=00:05:44:15">
    <povvalue>
      <priority value="5"/>
      <priority value="4"/>
      <priority value="0"/>
      <priority value="0"/>
    </povvalue>
  </segment>
</section>
```

FIG. 213

FIG. 214

```
</povvalue>
</segment>
</section>
<section>
<povvalue>
<priority value="4"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:06:18:06" end="smpte=00:06:24:04">
</segment>
<segment start="smpte=00:06:24:05" end="smpte=00:06:41:04">
</segment>
</section>
</section>
<section caption="SUMO WRESTLER2 VS. SUMO WRESTLER3">
<povlist>
<pointofview keyword="SUMO WRESTLER2"/>
<pointofview keyword="SUMO WRESTLER3"/>
</povlist>
<povvalue>
<priority value="5"/>
<priority value="5"/>
</povvalue>
<section>
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="5"/>
<priority value="5"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:06:18:05" end="smpte=00:07:00:24">
<povvalue>
```

FIG. 215

```
<priority value="0"/>
<priority value="0"/>
<priority value="5"/>
<priority value="5"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
</segment>
</section>
<section>
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="3"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:07:00:25" end="smpte=00:07:15:21">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="3"/>
<priority value="0"/>
</povvalue>
</segment>
</section>
<section>
<povvalue>
<priority value="2"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
```

FIG. 216

```
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:07:15:22" end="smpte=00:07:39:26">
  <povvalue>
    <priority value="2"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
</section>
<section>
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
<segment start="smpte=00:07:39:27" end="smpte=00:07:46:02">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
```

FIG. 217

```
</segment>
</section>
<section>
  <povlist>
    <pointofview keyword="SUMO WRESTLER2"/>
    <pointofview keyword="SUMO WRESTLER3"/>
  </povlist>
  <povvalue>
    <priority value="4"/>
    <priority value="4"/>
  </povvalue>
  <segment start="smpte=00:07:46:03" end="smpte=00:07:53:17">
    <povlist>
      <pointofview keyword="SUMO WRESTLER2"/>
      <pointofview keyword="SUMO WRESTLER3"/>
    </povlist>
    <povvalue>
      <priority value="4"/>
      <priority value="4"/>
    </povvalue>
  </segment>
</section>
<section>
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:07:53:18" end="smpte=00:08:01:21">
    <povvalue>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="4"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
    </povvalue>
  </segment>
</section>
```

FIG. 218

```
    <priority value="0"/>
  </povvalue>
</segment>
</section>
<section>
  <povlist>
    <pointofview keyword="SUMO WRESTLER2"/>
    <pointofview keyword="SUMO WRESTLER3"/>
  </povlist>
  <povvalue>
    <priority value="4"/>
    <priority value="4"/>
  </povvalue>
<segment start="smpte=00:08:01:22" end="smpte=00:08:18:02">
  <povlist>
    <pointofview keyword="SUMO WRESTLER2"/>
    <pointofview keyword="SUMO WRESTLER3"/>
  </povlist>
  <povvalue>
    <priority value="4"/>
    <priority value="4"/>
  </povvalue>
</segment>
<segment start="smpte=00:08:18:03" end="smpte=00:08:39:05">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
<segment start="smpte=00:08:39:06" end="smpte=00:08:47:06">
  <povlist>
    <pointofview keyword="SUMO WRESTLER2"/>
    <pointofview keyword="SUMO WRESTLER3"/>
  </povlist>
  <povvalue>
    <priority value="4"/>
    <priority value="4"/>
  </povvalue>
</segment>
```

FIG. 219

```
</povvalue>
</segment>
<segment start="smpte=00:08:47:07" end="smpte=00:09:03:27">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
<segment start="smpte=00:09:03:28" end="smpte=00:09:07:20">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
</segment>
<segment start="smpte=00:09:07:21" end="smpte=00:09:16:26">
  <povlist>
    <pointofview keyword="SUMO WRESTLER2"/>
    <pointofview keyword="SUMO WRESTLER3"/>
  </povlist>
  <povvalue>
    <priority value="4"/>
    <priority value="4"/>
  </povvalue>
</segment>
<segment start="smpte=00:09:16:27" end="smpte=00:09:20:25">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
  </povvalue>
```

FIG. 220

```
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
</segment>
<segment start="smpte=00:09:20:26" end="smpte=00:09:22:27">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
</segment>
</section>
<section>
<povlist>
<pointofview keyword="SUMO WRESTLER2"/>
<pointofview keyword="SUMO WRESTLER3"/>
</povlist>
<povvalue>
<priority value="5"/>
<priority value="5"/>
</povvalue>
<segment start="smpte=00:09:22:28" end="smpte=00:09:48:11">
<povlist>
<pointofview keyword="SUMO WRESTLER2"/>
<pointofview keyword="SUMO WRESTLER3"/>
</povlist>
<povvalue>
<priority value="5"/>
<priority value="5"/>
</povvalue>
</segment>
<segment start="smpte=00:09:48:12" end="smpte=00:09:51:27">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="5"/>
```

FIG. 221

```
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
</segment>
<segment start="smpte=00:09:51:28" end="smpte=00:09:57:01">
<povlist>
<pointofview keyword="SUMO WRESTLER2"/>
<pointofview keyword="SUMO WRESTLER3"/>
</povlist>
<povvalue>
<priority value="4"/>
<priority value="4"/>
</povvalue>
</segment>
<segment start="smpte=00:09:57:02" end="smpte=00:10:12:21">
<povlist>
<pointofview keyword="SUMO WRESTLER2"/>
<pointofview keyword="SUMO WRESTLER3"/>
</povlist>
<povvalue>
<priority value="4"/>
<priority value="4"/>
</povvalue>
</segment>
</section>
<section>
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
</povvalue>
<segment start="smpte=00:10:12:22" end="smpte=00:10:41:17">
<povvalue>
<priority value="0"/>
```

FIG. 222

```
<priority value="0"/>
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
</povvalue>
</segment>
</section>
<section>
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="5"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:10:41:18" end="smpte=00:11:28:17">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="5"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
</segment>
</section>
<section>
<segment start="smpte=00:11:28:18" end="smpte=00:11:41:29">
</segment>
</section>
</section>
</contents>
```

FIG. 223

DTD FOR DESCRIBING CONTEXT DESCRIPTION DATA THROUGH
USE OF XML

```
<?xml version="1.0"?>
```

```
<!ELEMENT contents (povlist?,section+)>
<!ATTLIST contents
  contents-id CDATA #REQUIRED
  title CDATA #REQUIRED
  runtime NMTOKEN #REQUIRED>
<!ELEMENT povlist (pointofview+)>
<!ELEMENT pointofview EMPTY>
<!ATTLIST pointofview
  keyword CDATA #REQUIRED>
<!ELEMENT section (povlist?,povvalue?,(section+|segment+))>
<!ATTLIST section
  caption CDATA #IMPLIED>
<!ELEMENT povvalue (priority+)>
<!ELEMENT priority EMPTY>
<!ELEMENT segment (povlist?,povvalue?,dominant-data)>
<!ATTLIST segment
  start CDATA #REQUIRED
  end CDATA #REQUIRED>
<!ELEMENT dominant-data EMPTY>
<!ATTLIST dominant-data
  frame-no NMTOKEN #IMPLIED
  start CDATA #IMPLIED
  end CDATA #IMPLIED
  locator CDATA #IMPLIED>
```

ONE EXAMPLE OF XML DOCUMENT RELATING TO CONTEXT DESCRIPTION DATA PREPARED BY DTD

```
<?xml version="1.0" encoding="euc-jp"?>
<!DOCTYPE contents SYSTEM "http://mserv.trl.mei.co.jp/SMML/program13.dtd">
```

```
<contents contents-id="urn:upi:nhk:12345" title="GROUND SUMO
TOURNAMENT" runtime="11:42">
  <povlist>
    <pointofview keyword="SUMO WRESTLER0"/>
    <pointofview keyword="SUMO WRESTLER1"/>
    <pointofview keyword="SUMO WRESTLER2"/>
    <pointofview keyword="SUMO WRESTLER3"/>
    <pointofview keyword="SUMO WRESTLER4"/>
    <pointofview keyword="SUMO WRESTLER5"/>
    <pointofview keyword="SUMO NAME"/>
    <pointofview keyword="WIN-LOSS RECORD"/>
```

FIG. 224

```
<pointofview keyword="VIDEO"/>
</povlist>
<section caption="SUMO WRESTLER0 VS. SUMO WRESTLER1">
  <povlist>
    <pointofview keyword="SUMO WRESTLER0"/>
    <pointofview keyword="SUMO WRESTLER1"/>
  </povlist>
  <povvalue>
    <priority value="5"/>
    <priority value="5"/>
  </povvalue>
  <section>
    <povvalue>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="1"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
    </povvalue>
    <segment start="smpte=00:00:00:00" end="smpte=00:00:04:17">
      <povvalue>
        <priority value="0"/>
        <priority value="0"/>
        <priority value="0"/>
        <priority value="0"/>
        <priority value="1"/>
        <priority value="0"/>
        <priority value="0"/>
        <priority value="0"/>
        <priority value="0"/>
      </povvalue>
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp01.gi
f"/>
      <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma01.m
p3"/>
    </segment>
  </section>
  <section>
    <segment start="smpte=00:00:04:18" end="smpte=00:00:09:08">
```

FIG. 225

```
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp02.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma02.m
p3"/>
</segment>
</section>
<section>
<povlist>
<pointofview keyword="SUMO WRESTLER0"/>
<pointofview keyword="SUMO WRESTLER1"/>
</povlist>
<povvalue>
<priority value="4"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:00:09:09" end="smpte=00:00:14:13">
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp03.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma03.m
p3"/>
</segment>
</section>
<section>
<povlist>
<pointofview keyword="SUMO WRESTLER0"/>
<pointofview keyword="SUMO WRESTLER1"/>
</povlist>
<povvalue>
<priority value="3"/>
<priority value="3"/>
</povvalue>
<segment start="smpte=00:00:14:14" end="smpte=00:00:19:19">
<povlist>
<pointofview keyword="SUMO WRESTLER0"/>
<pointofview keyword="SUMO WRESTLER1"/>
</povlist>
<povvalue>
<priority value="3"/>
<priority value="3"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp04.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma04.m
p3"/>
```

FIG. 226

```
</segment>
<segment start="smpte=00:00:19:20" end="smpte=00:00:22:19">
  <povvalue>
    <priority value="1"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp05.gi
f"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma05.m
p3"/>
</segment>
<segment start="smpte=00:00:22:20" end="smpte=00:00:28:10">
  <povlist>
    <pointofview keyword="SUMO WRESTLER0"/>
    <pointofview keyword="SUMO WRESTLER1"/>
  </povlist>
  <povvalue>
    <priority value="3"/>
    <priority value="3"/>
  </povvalue>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp06.gi
f"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma06.m
p3"/>
</segment>
</section>
<section>
  <povvalue>
    <priority value="3"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="2"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
```

FIG. 227

```
</povvalue>
<segment start="smpte=00:00:28:11" end="smpte=00:00:30:28">
  <povvalue>
    <priority value="3"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="2"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp07.gi
f"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma07.m
p3"/>
</segment>
<segment start="smpte=00:00:30:29" end="smpte=00:00:43:11">
  <povvalue>
    <priority value="3"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="1"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <dominant-data start="smpte=00:00:31:20" end="smpte=00:00:
35:05"/>
  </segment>
</section>
<section>
  <povlist>
    <pointofview keyword="SUMO WRESTLER0"/>
    <pointofview keyword="SUMO WRESTLER1"/>
  </povlist>
  <povvalue>
    <priority value="3"/>
    <priority value="3"/>
  </povvalue>
  <segment start="smpte=00:00:43:12" end="smpte=00:00:46:20">
```

FIG. 228

```
<povlist>
  <pointofview keyword="SUMO WRESTLER0"/>
  <pointofview keyword="SUMO WRESTLER1"/>
</povlist>
<povvalue>
  <priority value="3"/>
  <priority value="3"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp08.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma08.m
p3"/>
  </segment>
</section>
<section>
  <povvalue>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:00:46:21" end="smpte=00:00:57:09">
    <povvalue>
      <priority value="4"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
    </povvalue>
    <dominant-data start="smpte=00:00:47:00" end="smpte=00:00:
50:03"/>
      </segment>
  </section>
  <section>
    <povlist>
```

FIG. 229

```
<pointofview keyword="SUMO WRESTLER0"/>
<pointofview keyword="SUMO WRESTLER1"/>
</povlist>
<povvalue>
<priority value="3"/>
<priority value="3"/>
</povvalue>
<segment start="smpte=00:00:57:10" end="smpte=00:01:00:28">
<povlist>
<pointofview keyword="SUMO WRESTLER0"/>
<pointofview keyword="SUMO WRESTLER1"/>
</povlist>
<povvalue>
<priority value="3"/>
<priority value="3"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp09.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma09.m
p3"/>
</segment>
</section>
<section>
<povvalue>
<priority value="5"/>
<priority value="5"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:01:00:29" end="smpte=00:01:14:14">
<povvalue>
<priority value="5"/>
<priority value="5"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
```

FIG. 230

```
    <povvalue>
        <priority value="0"/>
    </povvalue>
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp10.gi
f"/>
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma10.m
p3"/>
    </segment>
</section>
<section>
    <povlist>
        <pointofview keyword="SUMO WRESTLER0"/>
        <pointofview keyword="SUMO WRESTLER1"/>
    </povlist>
    <povvalue>
        <priority value="2"/>
        <priority value="2"/>
    </povvalue>
    <segment start="smpte=00:01:14:15" end="smpte=00:01:24:20">
        <dominant-data start="smpte=00:01:15:20" end="smpte=00:01:
19:03"/>
        </segment>
    </povvalue>
    </segment>
</section>
<section>
    <povvalue>
        <priority value="4"/>
        <priority value="4"/>
        <priority value="0"/>
        <priority value="0"/>
        <priority value="0"/>
        <priority value="0"/>
        <priority value="0"/>
        <priority value="3"/>
        <priority value="0"/>
    </povvalue>
    <segment start="smpte=00:01:24:21" end="smpte=00:01:39:26">
        <povvalue>
            <priority value="4"/>
            <priority value="4"/>
            <priority value="0"/>
            <priority value="0"/>
            <priority value="0"/>
            <priority value="0"/>
            <priority value="0"/>
            <priority value="3"/>
        </povvalue>
    </segment>
</section>
```

FIG. 231

FIG. 232

```
55:10"/>
  </segment>
<segment start="smpte=00:02:02:17" end="smpte=00:02:31:09">
  <povlist>
    <pointofview keyword="SUMO WRESTLER0"/>
    <pointofview keyword="SUMO WRESTLER1"/>
  </povlist>
  <povvalue>
    <priority value="4"/>
    <priority value="4"/>
  </povvalue>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp13.gi
f"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma13.m
p3"/>
  </segment>
<segment start="smpte=00:02:31:10" end="smpte=00:02:47:18">
  <povvalue>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <dominant-data start="smpte=00:02:31:20" end="smpte=00:02:
38:11"/>
  </segment>
</section>
<section>
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="2"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>

```

FIG. 233

```
<segment start="smpte=00:02:47:19" end="smpte=00:02:59:03">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="2"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <dominant-data start="smpte=00:02:47:25" end="smpte=00:02:
48:02"/>
  </segment>
</section>
<section>
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="2"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:02:59:04" end="smpte=00:03:07:14">
    <povvalue>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="2"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
    </povvalue>
    <dominant-data start="smpte=00:02:59:10" end="smpte=00:03:
02:12"/>
    </segment>
  </section>
```

FIG. 234

```
<section>
  <povlist>
    <pointofview keyword="SUMO WRESTLER0"/>
    <pointofview keyword="SUMO WRESTLER1"/>
  </povlist>
  <povvalue>
    <priority value="3"/>
    <priority value="3"/>
  </povvalue>
  <segment start="smpte=00:03:07:15" end="smpte=00:03:13:28">
    <povlist>
      <pointofview keyword="SUMO WRESTLER0"/>
      <pointofview keyword="SUMO WRESTLER1"/>
    </povlist>
    <povvalue>
      <priority value="3"/>
      <priority value="3"/>
    </povvalue>
    <dominant-data start="smpte=00:03:08:12" end="smpte=00:03:
10:20"/>
  </segments>
  <segment start="smpte=00:03:13:29" end="smpte=00:03:21:28">
    <povvalue>
      <priority value="4"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
    </povvalue>
    <dominant-data start="smpte=00:03:15:10" end="smpte=00:03:
18:03"/>
  </segment>
  <segment start="smpte=00:03:21:29" end="smpte=00:03:33:15">
    <povvalue>
      <priority value="0"/>
      <priority value="4"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
```

FIG. 235

```
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<dominant-data start="smpte=00:03:22:08" end="smpte=00:03:
25:02"/>
</segment>
<segment start="smpte=00:03:33:16" end="smpte=00:03:47:00">
<povlist>
<pointofview keyword="SUMO WRESTLER0"/>
<pointofview keyword="SUMO WRESTLER1"/>
</povlist>
<povvalue>
<priority value="4"/>
<priority value="4"/>
</povvalue>
<dominant-data start="smpte=00:03:35:09" end="smpte=00:03:
38:21"/>
</segment>
<segment start="smpte=00:03:47:01" end="smpte=00:03:58:14">
<povvalue>
<priority value="4"/>
<priority value="0"/>
</povvalue>
<dominant-data start="smpte=00:03:48:00" end="smpte=00:03:
51:17"/>
</segment>
<segment start="smpte=00:03:58:15" end="smpte=00:04:12:27">
<povvalue>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
```

FIG. 236

```
        <priority value="0"/>
    </povvalue>
    <dominant-data start="smpte=00:03:59:02" end="smpte=00:04:
01:07"/>
    </segment>
</section>
<section>
    <povlist>
        <pointofview keyword="SUMO WRESTLER0"/>
        <pointofview keyword="SUMO WRESTLER1"/>
    </povlist>
    <povvalue>
        <priority value="5"/>
        <priority value="5"/>
    </povvalue>
    <segment start="smpte=00:04:12:28" end="smpte=00:04:20:01">
        <povlist>
            <pointofview keyword="SUMO WRESTLER0"/>
            <pointofview keyword="SUMO WRESTLER1"/>
        </povlist>
        <povvalue>
            <priority value="4"/>
            <priority value="4"/>
        </povvalue>
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp14.gi
f"/>
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma14.m
p3"/>
    </segment>
    <segment start="smpte=00:04:20:02" end="smpte=00:04:31:05">
        <povvalue>
            <priority value="4"/>
            <priority value="0"/>
            <priority value="0"/>
            <priority value="0"/>
            <priority value="0"/>
            <priority value="0"/>
            <priority value="0"/>
            <priority value="0"/>
        </povvalue>
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp15.gi
f"/>
```

FIG. 237

```
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma15.m
p3"/>
</segment>
<segment start="smpte=00:04:31:06" end="smpte=00:04:34:28">
<povvalue>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp16.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma16.m
p3"/>
</segment>
<segment start="smpte=00:04:34:29" end="smpte=00:04:37:06">
<povvalue>
<priority value="4"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp17.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma17.m
p3"/>
</segment>
<segment start="smpte=00:04:37:07" end="smpte=00:04:57:05">
<povlist>
<pointofview keyword="SUMO WRESTLER0"/>
<pointofview keyword="SUMO WRESTLER1"/>
</povlist>
<povvalue>
<priority value="5"/>
```

FIG. 238

```
    <povvalue>
        <priority value="5"/>
    </povvalue>
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp18.gi
f"/>
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma18.m
p3"/>
    </segment>
    <segment start="smpte=00:04:57:06" end="smpte=00:05:00:02">
        <povvalue>
            <priority value="5"/>
            <priority value="0"/>
            <priority value="0"/>
            <priority value="0"/>
            <priority value="0"/>
            <priority value="0"/>
            <priority value="0"/>
            <priority value="0"/>
        </povvalue>
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp19.gi
f"/>
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma19.m
p3"/>
    </segment>
    <segment start="smpte=00:05:00:03" end="smpte=00:05:02:06">
        <povlist>
            <pointofview keyword="SUMO WRESTLER0"/>
            <pointofview keyword="SUMO WRESTLER1"/>
        </povlist>
        <povvalue>
            <priority value="5"/>
            <priority value="5"/>
        </povvalue>
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp20.gi
f"/>
        <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma20.m
p3"/>
    </segment>
</section>
<section>
    <segment start="smpte=00:05:02:07" end="smpte=00:05:04:16">
        <dominant-data start="smpte=00:05:03:02" end="smpte=00:05:
02:20"/>
    </segment>
```

FIG. 239

```
</section>
<section>
<povvalue>
<priority value="5"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:05:04:17" end="smpte=00:05:13:25">
<povvalue>
<priority value="5"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp21.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma21.m
p3"/>
</segment>
<segment start="smpte=00:05:13:26" end="smpte=00:05:17:01">
<povvalue>
<priority value="5"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp22.gi
f"/>
```

FIG. 240

```
p3"/>
  </segment>
  <segment start="smpte=00:05:17:02" end="smpte=00:05:23:21">
    <povvalue>
      <priority value="4"/>
      <priority value="0"/>
      <priority value="0"/>
    </povvalue>
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma22.m
f"/>
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp23.gi
p3"/>
    </segment>
  </section>
  <section>
    <povvalue>
      <priority value="4"/>
      <priority value="4"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="4"/>
    </povvalue>
    <segment start="smpte=00:05:23:22" end="smpte=00:05:44:15">
      <povvalue>
        <priority value="5"/>
        <priority value="4"/>
        <priority value="0"/>
        <priority value="0"/>
        <priority value="0"/>
        <priority value="0"/>
        <priority value="0"/>
        <priority value="0"/>
        <priority value="4"/>
      </povvalue>
    </segment>
  </section>
</p3>
```

FIG. 241

```
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp24.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma24.m
p3"/>
</segment>
<segment start="smpte=00:05:44:16" end="smpte=00:05:50:27">
<povvalue>
<priority value="5"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp25.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma25.m
p3"/>
</segment>
<segment start="smpte=00:05:50:28" end="smpte=00:06:08:15">
<povvalue>
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp26.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma26.m
p3"/>
</segment>
<segment start="smpte=00:06:08:16" end="smpte=00:06:18:05">
<povvalue>
<priority value="4"/>
<priority value="4"/>
```

FIG. 242

```
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp27.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma27.m
p3"/>
</segment>
</section>
<section>
<povvalue>
<priority value="4"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:06:18:06" end="smpte=00:06:24:04">
<dominant-data start="smpte=00:06:18:25" end="smpte=00:06:
20:17"/>
</segment>
<segment start="smpte=00:06:24:05" end="smpte=00:06:41:04">
<dominant-data start="smpte=00:06:25:01" end="smpte=00:06:
30:11"/>
</segment>
</section>
</section>
<section caption="SUMO WRESTLER2 VS. SUMO WRESTLER3">
<povlist>
<pointofview keyword="SUMO WRESTLER2"/>
<pointofview keyword="SUMO WRESTLER3"/>
</povlist>
<povvalue>
<priority value="5"/>
<priority value="5"/>
```

FIG. 243

```
</povvalue>
<section>
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="5"/>
    <priority value="5"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:06:18:05" end="smpte=00:07:00:24">
    <povvalue>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="5"/>
      <priority value="5"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="4"/>
      <priority value="0"/>
      <priority value="0"/>
    </povvalue>
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp28.gi
f"/>
    <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma28.m
p3"/>
  </segment>
</section>
<section>
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="3"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:07:00:25" end="smpte=00:07:15:21">
    <povvalue>
```

FIG. 244

```
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="3"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp29.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma29.m
p3"/>
</segment>
</section>
<section>
<povvalue>
<priority value="2"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:07:15:22" end="smpte=00:07:39:26">
<povvalue>
<priority value="2"/>
<priority value="0"/>
</povvalue>
<dominant-data start="smpte=00:07:16:05" end="smpte=00:07:
18:23"/>
</segment>
</section>
```

FIG. 245

```
<section>
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <segment start="smpte=00:07:39:27" end="smpte=00:07:46:02">
    <povvalue>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="4"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
      <priority value="0"/>
    </povvalue>
    <dominant-data start="smpte=00:07:41:28" end="smpte=00:07:
43:01"/>
  </segment>
</section>
<section>
  <povlist>
    <pointofview keyword="SUMO WRESTLER2"/>
    <pointofview keyword="SUMO WRESTLER3"/>
  </povlist>
  <povvalue>
    <priority value="4"/>
    <priority value="4"/>
  </povvalue>
  <segment start="smpte=00:07:46:03" end="smpte=00:07:53:17">
    <povlist>
      <pointofview keyword="SUMO WRESTLER2"/>
      <pointofview keyword="SUMO WRESTLER3"/>
    </povlist>
    <povvalue>
      <priority value="4"/>
      <priority value="4"/>
    </povvalue>
  </segment>
</section>
```

FIG. 246

```
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp30.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma30.m
p3"/>
</segment>
</section>
<section>
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:07:53:18" end="smpte=00:08:01:21">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp31.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma31.m
p3"/>
</segment>
</section>
<section>
<povlist>
<pointofview keyword="SUMO WRESTLER2"/>
<pointofview keyword="SUMO WRESTLER3"/>
</povlist>
<povvalue>
<priority value="4"/>
<priority value="4"/>
```

FIG. 247

```
</povvalue>
<segment start="smpte=00:08:01:22" end="smpte=00:08:18:02">
  <povlist>
    <pointofview keyword="SUMO WRESTLER2"/>
    <pointofview keyword="SUMO WRESTLER3"/>
  </povlist>
  <povvalue>
    <priority value="4"/>
    <priority value="4"/>
  </povvalue>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp32.gi
f"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma32.m
p3"/>
</segment>
<segment start="smpte=00:08:18:03" end="smpte=00:08:39:05">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp33.gi
f"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma33.m
p3"/>
</segment>
<segment start="smpte=00:08:39:06" end="smpte=00:08:47:06">
  <povlist>
    <pointofview keyword="SUMO WRESTLER2"/>
    <pointofview keyword="SUMO WRESTLER3"/>
  </povlist>
  <povvalue>
    <priority value="4"/>
    <priority value="4"/>
  </povvalue>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp34.gi
f"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma34.m
p3"/>
```

FIG. 248

```
</segment>
<segment start="smpte=00:08:47:07" end="smpte=00:09:03:27">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp35.gi
f"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma35.m
p3"/>
</segment>
<segment start="smpte=00:09:03:28" end="smpte=00:09:07:20">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="4"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp36.gi
f"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma36.m
p3"/>
</segment>
<segment start="smpte=00:09:07:21" end="smpte=00:09:16:26">
  <povlist>
    <pointofview keyword="SUMO WRESTLER2"/>
    <pointofview keyword="SUMO WRESTLER3"/>
  </povlist>
  <povvalue>
    <priority value="4"/>
    <priority value="4"/>
  </povvalue>
```

FIG. 249

```
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp37.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma37.m
p3"/>
</segment>
<segment start="smpte=00:09:16:27" end="smpte=00:09:20:25">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp38.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma38.m
p3"/>
</segment>
<segment start="smpte=00:09:20:26" end="smpte=00:09:22:27">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp39.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma39.m
p3"/>
</segment>
</section>
<section>
<povlist>
<pointofview keyword="SUMO WRESTLER2"/>
<pointofview keyword="SUMO WRESTLER3"/>
</povlist>
```

FIG. 250

```
<povvalue>
  <priority value="5"/>
  <priority value="5"/>
</povvalue>
<segment start="smpte=00:09:22:28" end="smpte=00:09:48:11">
  <povlist>
    <pointofview keyowrd="SUMO WRESTLER2"/>
    <pointofview keyword="SUMO WRESTLER3"/>
  </povlist>
  <povvalue>
    <priority value="5"/>
    <priority value="5"/>
  </povvalue>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp40.gi
f"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma40.m
p3"/>
</segment>
<segment start="smpte=00:09:48:12" end="smpte=00:09:51:27">
  <povvalue>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="5"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
    <priority value="0"/>
  </povvalue>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp41.gi
f"/>
  <dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma41.m
p3"/>
</segment>
<segment start="smpte=00:09:51:28" end="smpte=00:09:57:01">
  <povlist>
    <pointofview keyowrd="SUMO WRESTLER2"/>
    <pointofview keyword="SUMO WRESTLER3"/>
  </povlist>
  <povvalue>
    <priority value="4"/>
    <priority value="4"/>
  </povvalue>
```

FIG. 251

```
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp42.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma42.m
p3"/>
</segment>
<segment start="smpte=00:09:57:02" end="smpte=00:10:12:21">
<povlist>
<pointofview keyword="SUMO WRESTLER2"/>
<pointofview keyword="SUMO WRESTLER3"/>
</povlist>
<povvalue>
<priority value="4"/>
<priority value="4"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp43.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma43.m
p3"/>
</segment>
</section>
<section>
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
</povvalue>
<segment start="smpte=00:10:12:22" end="smpte=00:10:41:17">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
<priority value="4"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="0"/>
<priority value="4"/>
</povvalue>
```

FIG. 252

```
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp44.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma44.m
p3"/>
</segment>
</section>
<section>
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="5"/>
<priority value="0"/>
</povvalue>
<segment start="smpte=00:10:41:18" end="smpte=00:11:28:17">
<povvalue>
<priority value="0"/>
<priority value="0"/>
<priority value="5"/>
<priority value="0"/>
</povvalue>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMV/dmp45.gi
f"/>
<dominant-data locator="http://mserv.trl.mei.co.jp/DMA/dma45.m
p3"/>
</segment>
</section>
<section>
<segment start="smpte=00:11:28:18" end="smpte=00:11:41:29">
<dominant-data start="smpte=00:11:29:13" end="smpte=11:32:2
1"/>
</segment>
</section>
</section>
</contents>
```